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A SURVEY OF STUDIES ON RURAL  
SMALLHOLDINGS (1970-1983)

by

A.D. Meister

DISCUSSION PAPER IN NATURAL RESOURCE ECONOMICS NO. 8

Department of Agricultural Economics and Farm Management,  
Massey University, Palmerston North, New Zealand

1984

ISSN 0110-2044

A SURVEY OF STUDIES ON RURAL  
SMALLHOLDINGS (1970-1983)

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*Discussion Paper in Natural Resource  
Economics No. 8,  
Department of Agricultural Economics  
and Farm Management,  
Massey University, Palmerston North,  
New Zealand*

## FOREWORD

In New Zealand, as in other industrialized western countries, important changes in community values are taking place. There is increasing interest in the quality of life. The expansion of cities which took place post World War II often resulted in a deterioration of urban living conditions. As people became dissatisfied with life in the city they became more aware of their rural surroundings. Increasing incomes allowed some to move out into rural areas.

This urban-rural drift, especially noticeable at the perimeters of large urban centres, brought with it competition for land, and conflict; the basic conflict being one where on the one hand there is the desire of some people wanting to live and work (on a full or part-time basis) in the rural area on a piece of land they can call their own, while on the other hand, there is the desire of others to keep the rural area in full-time, larger scale farms so as to protect the land for agricultural production.

This area of conflict has now been part of the rural scene for a decade and a half. The time has come to look at the evidence and ask if the conflict is a real one. Or whether it is possible to satisfy the desires of these two groups of people simultaneously?

To answer this question it is necessary to study what the impact has been of those rural subdivisions that were allowed to go ahead. This discussion paper provides this material, or evidence, and it is left to the reader to draw his own conclusions.

It is hoped that this discussion paper will lead to a greater understanding of the nature and impact of small rural subdivisions. As a further consequence, it is hoped that this greater understanding may contribute to better rural planning so as to increase society's welfare as a whole.

On behalf of the author I would like to thank the following people for their assistance:

Ian Ritchie, New Zealand Association of Small Farmers, for his encouragement and support for the undertaking of this project;

Murray Arthur-Worsop, Ministry of Agriculture and Fisheries, for providing copies of many of the studies summarised in this discussion paper;

Pearl Smaller, Centre for Agricultural Policy Studies, and Jackie Ward P.E.P. worker, for their assistance in the somewhat daunting task of classifying and summarising the studies.

*R.J. Townsley,*  
Head, Department of Agricultural Economics and Farm Management.

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## INTRODUCTION

### 1.1 Rural Subdivisions and Conflicts

Over the last two decades, the demand for rural subdivisions has risen dramatically. The reasons for this increased demand can be found in rising incomes and changing community values, the latter often being reflected in a search for a better quality of life.

New Zealand, although well endowed with land on a per capita basis, has little good agricultural land. What it does possess in terms of good or elite soils is often found round the major population centres. Nearly all of this good land is currently used for a wide variety of agricultural or horticultural activities or it is covered over by houses and cities.

Subdivision of land to satisfy the demand for smallholdings to be used for part-time or full-time farming, for crafts or for rural residential living will in many cases imply the carving up of larger farm units or the subdivision off of corners or small lots from larger units. This in itself does not create any problems and can be achieved at a small legal and surveyor's cost. However, physical feasibility does not immediately imply social desirability. And it is with regard to social desirability that many conflicts have arisen in New Zealand, typified by the title of an early paper dealing with this subject, "That Contentious Ten Acre Block!"

Although many of the conflicts have national importance, most of the conflicts have to be dealt with and resolved at the local or County level. It is here that County Councils, using the authority given them under various Acts of Parliament, set down objectives and formulate regulations (or ordinances) which may or may not allow for rural subdivisions and the conditions that may apply.

The broad guidelines for rural planning (especially land use planning) are found in statutes like the Town and Country Planning Act of 1977. But these guidelines are general and non-specific. The 'nitty-gritty' of land use planning, as found in District Schemes, is the result of a process of interaction between county councillors, planners, ratepayers and government departments all having their biases, fears, suspicions and hopes.

When faced with the rapid changes occurring in land-use in the early seventies, many County Councils were caught unprepared. On the one hand there was the Town and Country Planning Act exhorting them to encourage 'wise' land use, to protect productive agricultural land for food production, and to avoid urban sprawl, while on the other hand there was the demand of ratepayers and others to allow more subdivision to stop rural depopulation and bring back vitality to a countryside depleted of people. The task of rural planning was to many Councils, a daunting one, and their initial reaction was in many

cases to put into place restrictive measures in terms of minimum subdivision and 'economic unit' criteria. The philosophy basically was a 'knee-jerk reaction' against change, to avoid the unknown and to wait and see. In some areas this actually did accelerate the amount of subdivisions as people tried to get in before the restrictions came on (Winn, 1970).

The arguments put forward by Councils to justify their action were often put in terms of:

- loss of high quality agricultural land and a reduction in productivity,
- urban sprawl and demand on services,
- speculation and the pushing up of land prices,
- urban nuisance and undesirable element in the rural area,
- etc.

All the points raised above, if true, would provide some reason for rural subdivision control. However, when the arguments were raised little was known about the impact of rural smallholdings on the rural area. New Zealand as such had had little experience with this new development in land use, and overseas experience, often from countries with much greater population pressures, was not always relevant. Therefore a lot of the objections raised against rural subdivisions and the creation of smallholdings was based on conjecture and guesswork. Now, many years after the initial flush of land-use changes, the time has come to evaluate the effects that smallholdings have had in terms of economic, social and environmental parameters. It is the aim of this discussion paper to provide the basic information so that readers can make their own evaluation of what the effect has been all over New Zealand of the creation of rural smallholdings. To this end as many studies as possible (many of which are unpublished) have been put together in a summary form to provide a quick but thorough overview of the extent and impact of rural smallholdings in New Zealand.

## 1.2 Scope of This Publication

In this discussion paper 25 studies on rural smallholdings are summarised. Most of these studies are surveys of smallholdings. However, some are detailed discussions of previous surveys done.

For each study the following information is provided:

- Author(s)
- Date published
- Objectives
- Area surveyed
- What/who surveyed
- Type of survey



Who did the survey  
 Summary  
 Conclusion.

All the information is factual and taken straight from the studies. The summary and conclusions however, often had to be made up as none was provided. Care has been taken to only reflect what the author(s) said. All conclusions reflect the opinion of the particular study's author(s) and not the opinion of the writer of this discussion paper.

The twenty-five studies selected are the ones this writer is most familiar with. Other people have been consulted to determine if important studies have been missed out. So, even though the list is not exhaustive, it is felt that these 25 studies represent the majority of studies done between 1970 and 1983.

Not included in this discussion paper are studies that discuss rural planning or smallholdings in general. Although these studies are clearly related and very informative, including them was felt to be outside the scope of this paper which mainly aims at providing factual information about actual surveys. For those wanting to read more widely about this subject a brief bibliography of selected references is provided with the references of the actual studies discussed.

The studies included cover a wide area of New Zealand (see Figure 1). The majority of studies are in the North Island around major population centres. If important studies do not appear, especially ones in the South Island, the writer of this paper offers his apologies for this 'unintentional' oversight.

### 1.3 The Ultimate Aim of This Publication

As stated in the introduction, the time has come now to evaluate the role and place of smallholdings in the rural area of New Zealand. The conflicts about subdivision for rural smallholdings still have not disappeared. Many Councils are still struggling with the 'nitty-gritty' of how to write the ordinances to control or not control rural subdivision. Much of this uncertainty is based on fear of the unknown. It is the writer's contention that the effect of smallholdings on an area is no longer an unknown. There is now plenty of evidence for all to see and read to form a judgement as to the contribution smallholdings have/have not made to the welfare of New Zealand's society.

A rural smallholding is, of course, not a single, easily definable entity. It has in reality many facets. Smallholdings can be full-time farming units, part-time farms, stepping stone units, homes for rural contractors, places to pursue arts and crafts or a rural residential dwelling. Therefore, depending on the use made of the smallholding it may or may not increase agricultural productivity. *But agricultural productivity or economic efficiency is not the one and only criterion by which smallholdings should be judged.*

## LEGEND

Auckland Region

- 6 Ten Acre Subdivisions in the Waitemata County: A Study of Minimum Subdivision Regulations in Rural Land. 1970.
- 7 The Ten Acre Subdivision in Manukau City and Franklin County: A Study of Changes in Rural Land Use. 1974.
- 8 Small Rural Properties: the Effect of Part-time Farming and Residential Use on Agricultural Productivity. A Case Study in the Rodney County. 1978.
- 9 Rural Smallholdings in the Vicinity of Auckland - A Pilot Study. 1979.
- 10 Rural Smallholdings in the Auckland Region. 1980.

Tauranga

- 11 Land Use Survey of Small Rural Properties. 1980.

Rotorua

- 12 Survey of Small Rural Lots. 1980.

Gisborne

- 13 A Study of Grape Growing on Smallholdings - Economic and Social Implications. 1979.

Taupo

- 14 Small Rural Lots. A Survey and Commentary on Small Rural Lots and Rural Planning in Taupo County. 1977.

Hawkes Bay

- 15 The Geography of Small Rural Farmlets: A Case Study of the Hawkes Bay Rural 'B' Zone. 1978.

Taranaki

- 16 A Study of Rural Smallholdings in Taranaki County. 1980.

Manawatu

- 17 The Economic Implications Associated With Part-Time Farming on Rural Subdivisions. A Case Study in the Manawatu. 1975.
- 18 Land Use Opinion Survey. 1980.
- 19 Smallholdings: Net Contributors or a Cost to the Community: A Study in Oroua County. 1981.
- 20 Smallholdings in Oroua County. 1981.

Upper Hutt

- 21 Part-Time Farming in Upper Hutt. 1977.

Nelson

- 22 Homesteader Survey. 1979.

Christchurch Region

- 23 Part-Time Farming in the Christchurch Rural-Urban Fringe. 1974.
- 24 The Effect on Productivity of the Subdivision of an Area of Class I Agricultural Land. 1976.
- 25 Smallholdings in Papanui County. 1979.

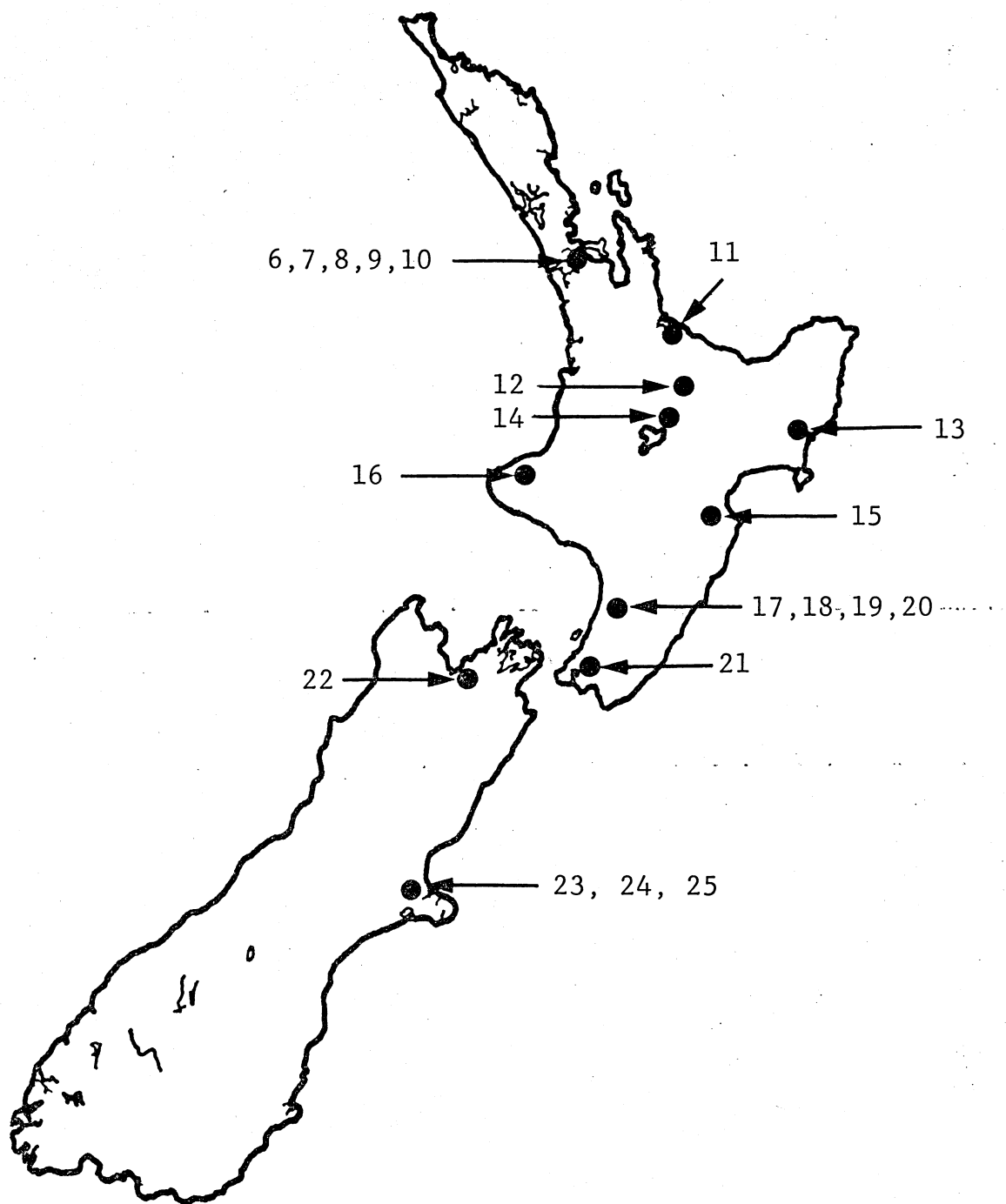


FIGURE 1: Regional Distribution of Studies on Rural Smallholdings

Given the suggestion by the Economic Monitoring Group Report of December 1983 that pastoral farming should not be further encouraged, the agricultural productivity criterion is clearly no longer adequate. Also the Town and Country Planning Act itself goes beyond this criterion and talks about "conservation, protection, and enhancement of the physical, cultural and social environment". Or, in section 4 of the Act, talks about the "general welfare of the people". Therefore it is hoped that people will read the studies discussed and judge the impact of smallholdings in this wider sense.

Finally, this discussion paper only provides information. No overall conclusions or recommendations are drawn. It is hoped that the paper makes available, in an easy to read format, a thorough overview of surveys done on smallholdings. It is also hoped that this information will lead to a more informed debate about rural smallholdings and their merits, and will lead to more enlightened planning for rural subdivision.

---

SMALL RURAL PROPERTIES:  
PART ONE: A SURVEY OF DISTRIBUTION AND USES

*Author:*

John H. Jowett

*Date Published:*

1976. Ministry of Works and Development.

*Objectives:*

1. To estimate the number of rural residential properties existing at the date of the survey, and to get an idea of where they were.
2. To estimate the total area of land involved.
3. To obtain some general data on the uses to which such properties are put.
4. To obtain a subsample of rural residential properties for use in the interview survey.

*Area Surveyed:*

New Zealand, divided into 24 regions.

*What/Who Surveyed:*

Rural residential properties in each of the several regions in New Zealand. Sample sizes derived from each area independently, the sampling frame being obtained from the Valuation Roll. Holdings surveyed were defined as rurally zoned holdings of between 0.8 and 10 hectares in area, used as the full-time home of a household, the head of which is either retired or engaged in full-time work away from the property.

This report was the first of a number produced relating to this study, by the Town and Country Planning Division of the Ministry of Works and Development.

*Type of Survey:*

Postal survey, 1974.

12,701 of the 18,501 questionnaires sent out were returned in usable form (69 percent).

*Who Did the Survey:*

Town and Country Planning Division, Ministry of Works and Development.

*Summary:*

1. The survey found that there were approximately 27,000 small rural properties, occupying just over 104,000 hectares of land. Although these were distributed throughout New Zealand, the majority occurred near major population centres, particularly around Auckland and Christchurch where 4.45 and 2.45 percent respectively of land in smallholdings of 10 hectares or less was found.
2. Of these 27,000 small rural properties, almost 15,000 could be classed as rural residential occupying just over 55,700 hectares of land. Only 17 percent of these rural residential properties had no uses apart from residential.
3. The most common use was residential, followed by (in order of importance), grazing, commercial cropping and combinations of these two.
4. Of the rural residential properties, 43 percent of the owners received some net cash income from the property (ranging from all net income of the owner to less than 25 percent).

*Conclusions:*

The results of the survey showed that the most common use of small rural holdings was residential, but that the majority of these, over 83 percent, had secondary uses. About half of all small properties provided additional cash income for the family.

---

A SURVEY OF SMALLHOLDING AGRICULTURE  
IN NEW ZEALAND

*Author:*

Economics Division, Ministry of Agriculture and Fisheries.

*Date Published:*

August 1977, Research Paper 10/77.

*Objectives:*

In contrast to the objectives of a Ministry of Works and Development survey carried out by the Town and Country Planning Division in 1974/75 (John H. Jowett, "Small Rural Properties: Part One: A Survey of Distribution and Uses", 1976), this paper is concerned with the agricultural aspects of smallholdings in New Zealand whether lived on or not. A complete computer run was taken from the MOWD survey, and analysed for its agricultural characteristics.

*Area Surveyed:*

New Zealand.

*What/Who Surveyed:*

Throughout the report, the total of 36,411 properties was taken as the primary source of information (some 5,824 of these were held in conjunction with other titles). Therefore, this report covered the same land uses, livestock and small crops as the MOWD analysis, but treated the number of land occupiers in a slightly different way. If total ownership exceeded 25 acres, the response was discarded. For the present analysis, the MOWD data were grouped into a different set of regions, nearer to the recognised statistical regions of New Zealand.

*Type of Survey:*

Mail survey.

*Who Did the Survey:*

Town and Country Planning Division, Ministry of Works and Development

*Summary:*

1. The most common land use was residential (65 percent of returns), followed by grazing (55 percent), cropping (20 percent) and not used (10 percent). Vacant holdings were most common in the Rotorua-Taupo and West Coast areas.
2. Sheep were the most common type of stock grazing (29 percent of all properties) followed by beef cattle (22 percent) and poultry (21 percent). Properties could have more than one type of livestock.
3. Vegetables were grown on 14 percent of all properties, the major areas being Auckland, Hawkes Bay and Canterbury, while 12 percent of the properties grew fruit and berry crops, the major concentrations found in South Auckland, East Coast, Hawkes Bay and the Nelson-Marlborough region.
4. In the two major concentrations of smallholdings, Auckland and Canterbury, 63 percent and 59 percent respectively of household heads in residence, were employed full-time off the property. High levels of full-time employment off the property were also found in the Rotorua-Taupo, Wairarapa and Wellington regions, but the trend was reversed in the Hawkes Bay region (48 percent) and the Nelson-Marlborough region (52 percent).
5. Hawkes Bay, East Coast, Wairarapa, Canterbury and Taranaki-Manawatu were the five most important regions where a majority of occupied holdings were being put to a net income earning use. West Coast and Wellington had a very small proportion of holdings producing a cash income - 18 percent and 39 percent respectively. Grazing was, on average, the highest income earner, followed by commercial crops and letting of land. On only 22 percent of eligible properties was the owner wholly dependent on the holding for his income.

*Conclusions:*

Smallholdings can be put to productive use but the survey shows that only about half were actually used in this way when used for residential purposes. Growing of crops which require high labour and capital inputs and/or specialist management skills provides an area where smallholdings may make a worthwhile contribution by increasing agricultural production.

It is suggested that by making small properties available to farm workers, a more stable and therefore more skilled and productive workforce may result, as well as making the maintenance of social services more practicable. At present there is no means of stopping sales to people with no farming links - one approach to this may be through the expansion of rural townships.



Smallholdings can be a productive use of the land and satisfy many of the wants of modern society, but it must be ensured that intensively managed smallholdings are not diverted into less productive uses, or lost to agriculture altogether. A balance of all objectives must be found in a new approach to rural planning.

---

SMALL RURAL PROPERTIES: PART THREE:  
PROVISION OF PUBLIC SERVICES AND  
RURAL RESIDENTIAL LIVING

*Author:*

Win Gardner.

*Date Published:*

1978. Ministry of Works and Development.

*Objectives:*

To examine the status of the supply of public services to rural residential (RRL) households with particular emphasis on:

- measuring the prevalence of current public service provisions;
- obtaining an appreciation of the factors which have been formative in determining the current level and distribution of these services;
- examining those forces which explain their desirability.

*Area Surveyed:*

New Zealand.

*What/Who Surveyed:*

A random sample of 739 RRL household heads, interviewed during December 1975. RRL refers to households on 0.8 to 10 hectare holdings in rural zones, where the household head either is retired or works full-time away from the property. All holdings for which interviews were carried out were identified as RRL in an earlier mail survey by Jowett, (see "Small Rural Properties: Part One: A Survey of Distribution and Uses", 1976).

*Type of Survey:*

Personal.

739 householders were interviewed.

*Who Did the Survey:*

Town and Country Planning Division, Ministry of Works and Development.

*Summary:*

1. Eleven public services were specifically investigated: electricity supply, piped sewage, piped stormwater drainage, piped water supply, sealed public road outside holding, school bus, public bus, telephone, postal delivery, rubbish collection and milk supply.
2. The availability of services ranged from near 100 percent for electricity and telephone through, in order, postal delivery, sealed road, milk delivery and school bus in the 65-85 percent range, public bus, piped water supply and rubbish collection in the 25-40 percent range, and down to piped stormwater and sewage in the 5-10 percent range.
3. Only three services were considered essential by 50 percent or more of the rural residential households. These were electricity, telephone and postal delivery. Three further services were considered desirable by 50 percent or more households. These were sealed roads, milk delivery and school bus.
4. It was found that the overall picture was one of satisfaction with 78 percent not feeling disadvantaged through lack of services, 90 percent feeling equally or more satisfied with their present living place compared with their last, and 80 percent feeling that they would almost certainly or probably be living on the present property in five years' time. However, it should be noted that while 78 percent did not feel disadvantaged by the lack of services, 86 percent of RRL households would like one or more services that they do not have. These apparently contradictory percentages suggest the need to distinguish between the absence of an advantage and the presence of a felt disadvantage.
5. Servicing was far from being the most important factor governing relative satisfaction with present living place. The most substantial influence was whether the immediately previous experience of the respondent had been urban or rural.

*Conclusion:*

In relation to the general life-style of the RRL population, it was concluded that while service factors do have some influence on relative satisfaction with present living place, likely future location, or likelihood of moving, they are not a major source of influence. They may, however, be amongst those most amenable to policy change.

Location of RRL holdings (through RRL zone location decisions) in the more rural areas (as opposed to being closer to urban centres) will tend to dampen the demand for services. However, more rural location tends to reduce the relative satisfaction of RRL household heads,

presumably because it reduces accessibility to urban facilities and increases transport costs. It could also be a practical proposition only for households with higher incomes, creating isolated social enclaves and be energy expensive. Like other public decisions associated with RRL, the pros and cons are many, the relationship complex and the ultimate outcome somewhat unpredictable.

---

DATA ON SMALL RURAL PROPERTIES  
SUPPLEMENTARY INFORMATION PAPER

*Authors:*

Win Gardner, Dianne McDonald, with the assistance of Bronwyn Hardaker.

*Date Published:*

1979. Ministry of Works and Development.

*Area Surveyed:*

New Zealand.

*What/Who Surveyed:*

This paper supplies information from a mail survey of 18,500 properties throughout New Zealand carried out at the end of 1974 (results contained in "Small Rural Properties: Part One: A Survey of Distribution and Uses", John Jowett, 1976) and an interview survey of rural residential households throughout the country carried out at the end of 1975 ("Small Rural Properties: Part Three: Provision of Public Services and Rural Residential Living", Win Gardner, 1978).

The paper also includes data from Research Paper 10/77 by the Economics Division of the Ministry of Agriculture and Fisheries, entitled, "Survey of Small Holding Agriculture in New Zealand".

Tabulations relating to the scope of the unpublished "Small Rural Properties: Part Two: Report" are attached as an annex, along with a brief outline of the interview survey on which the results are based. Analysis of data from an aggregated data set of the 1975 Agricultural Census has been carried out, and a sampling of this information is also found in an annex to this paper.

Results produced in table form. No printed conclusions.

---

## COMPARISON OF RURAL RESIDENTIAL WITH OTHER NEW ZEALAND HOUSEHOLDS

*Authors:*

Charles Crothers and Corrine Blackmore.

*Date Published:*

January 1980. Ministry of Works and Development.

*Objectives:*

A description of the characteristics of households occupying rural residential (RRL) properties, and a comparison against New Zealand distributions of these same characteristics. This comparison aimed at assessing to what extent RRL households were similar to either urban or rural households or whether they formed an intermediate category.

*Area Surveyed:*

New Zealand.

*What/Who Surveyed:*

A sample of 750 households was drawn from the population of all occupied dwellings with RRL households as identified through a previous mail questionnaire survey (see Jowett, 1975). The final sample was 739.

The "Urban" and "Rural" population used for the comparison came from the 1976 or 1971 Census and the Department of Statistics Household Sample Survey (HHS). By definition a RRL householder lived on a rural-sized section but was not full-time employed on that holding.

*Type of Survey:*

Analysis of data from existing surveys and statistical data.

*Who Did the Survey:*

Charles Crothers and Corrine Blackmore. Research Section, Town and Country Planning Division, Ministry of Works and Development, Wellington.

*Summary:*

1. About two-thirds of the RRL sample described their present type of settlement as rural, with most of the remainder describing their residential content as mixed urban/rural.
2. The South Island was slightly over-represented amongst RRL households although the geographical distribution of RRL holdings was very similar to the distribution of total agricultural holdings.
3. The RRL group had almost twice the HSS population of male heads not active in the workforce.
4. While there was a small concentration of high income earners amongst RRL households - in the two top income brackets used in the two surveys there were  $1\frac{1}{2}$  times as many RRL income earners as expected from the HSS distribution - there was also a heightened preponderance of low incomes.
5. Although the average number of school children in RRL households was exactly the same as for the total HSS households, the RRL average included more households with two or more schoolchildren and fewer households with no schoolchildren. This latter point was surprising, given the number of retired RRL heads.
6. RRL households were more likely to have at least 2 vehicles, and very few had none at all.
7. A large RRL group of households report that they grow their own vegetables and potatoes, a substantially higher proportion than even rural households.

*Conclusion:*

In a few characteristics, RRL households were quite similar to general population distributions - sex, rates, marital status, occupation status of females, and income of females.

When these few similarities were placed in the context of the 31 national comparisons and the 90-odd settlement size comparisons, the overwhelming point was that RRL households were quite different from urban, town or rural households or households generally. Many, but not all, of these differences were at least partly related to the older age structure and the higher proportion of families amongst RRL households. Examples of characteristics associated in this way were labour force participation, employment status, income levels, length of stay, involvement in growing vegetables and potatoes, and possibly telephone availability. In addition, the rural or semi-rural setting of RRL households showed up in their heightened use of private transport.

RRL households included a greater proportion of older people and those retired from the labour force. Of the employed males many were employers or self-employed and a reasonable proportion were in the

professional or managerial occupational groups, but the majority were blue-collar workers. The range of income distribution was generally similar to the national pattern and there was a large number of households with families.

RRL was found to be not a recent fad, since RRL households tended to have been on their properties for a longer time than the average.

Whatever the reasons for RRL households being different from the population groups compared with them in this study, the important point is that there were substantial differences and that these need to be taken into account in devising policies for rural residential properties.

---



TEN ACRE SUBDIVISIONS IN THE WAITEMATA COUNTY:  
A STUDY OF MINIMUM SUBDIVISION REGULATIONS  
IN RURAL LAND

*Author:*

G.O. Winn.

*Date Published:*

September 1970, University of Auckland.

*Objectives:*

1. To study the growth, distribution and organisation of ten acre subdivisions in the Waitemata County.
2. To examine the factors that have influenced the growth of this type of subdivision in rural land.
3. To study the operation of minimum subdivision regulations.
4. To assess the effectiveness of the 10 acre minimum subdivision regulations for Rural A land as a protection against land being lost to agricultural use.

*Area Surveyed:*

Waitemata County.

*What/Who Surveyed:*

A survey of 10 acre subdivisions, based on a list of 1267 minimum rural subdivisions supplied by the Waitemata County. A total of 1263 lots were visited to obtain data on general characteristics.

An in depth survey was made of a sample of 120 (every tenth holding was selected from the list of 1267).

*Type of Survey:*

All personal interviews.

*Who Did the Survey:*

G.O. Winn, dissertation in partial fulfilment of the requirements for the Diploma of Town Planning, University of Auckland.

*Summary:*

1. With relatively few exceptions, subdivisions in eastern Waitemata were held speculatively for future sale and development. The growing number of residential lots indicated that this use was to become characteristic: with the exception of six holdings used for poultry farming, glasshouse growing and market gardening, the enforcement of the minimum size of subdivision had not led to an intensification of agricultural land use but had the reverse effect.

In the western portion of the County, the largest proportion of the 10 acre subdivisions had been retained in some form of agricultural use and in many instances there had been an intensification of production per acre, although in some cases, here too a decline had resulted.

2. Even though part-time farmers only occupied 4 percent of the 10 acre lots, they were nevertheless an important part of the overall pattern of subdivision. The productivity of part-time farms was of slight significance. Most part-time farmers appeared to grow enough produce to cover their annual rate demands or to provide additional 'pocket-money'. The movement into the rural-urban fringe of part-time farmers appeared not to be to escape anything that is inherent in urbanism as a way of life but rather it appeared to be a desire to retain this way of life and yet avoid some of the incidental disadvantages associated with large metropolitan centres.
3. Twelve percent of the 10 acre holdings in the County were utilised for full-time agricultural purposes. This trend in which extensive agricultural systems are replaced by more intensive forms, was expected to continue. The growth of intensive agriculture oriented to the urban market was a natural development around metropolitan centres, and minimum rural subdivision regulations only order size and shape of subdivision and not the rate, extent and pattern.
4. The land survey showed speculative ownership of 10 acre lots to be by far the most important category. Many farmers had also subdivided their farms into 10 acre lots for long term speculative reasons. These lots were not for immediate sale as the owners still intended to operate the land as a single farm unit for a number of years. These farmers had also subdivided their farms as a precaution against the possible introduction of a 50 acre minimum clause.
5. Some 10 acre lots were also bought for recreational uses such as pony clubs and horse riding schools.

6. The basic factor underlying all planning and administrative problems was that the planners of the Waitemata County had insufficient authority under the existing regulations to control subdivisions 10 acres and over in the rural area and as such, had inadequate power to enforce their planning goals at the rural-urban fringe. As shown in the land use survey, it was apparent that this lack of subdivisional control had been directly responsible, amongst other things, for increased land speculation and the loss of agricultural land and for the breaking up of land into small parcels that could prove unsuitable for further closer development.
7. From a study of overseas literature it was concluded that, given the dynamic factors operating in Auckland's fringe area, subdivision of rural land was a natural process that cannot necessarily be prevented by restrictive legislation.

*Conclusion:*

The County planners in Waitemata had to tacitly sanction 10 acre subdivisions for they had no powers to control (i.e. no operative district scheme), or prevent, or restrict, or approve, such subdivisions. This has produced many unsatisfactory subdivisions causing widespread land speculation, proliferation of land ownership, 'peppering' of some rural areas with residential 'sections', and the loss of agricultural land.

It was also concluded that it was extremely doubtful whether the proposed 50 acre minimum would solve all problems of subdivision in the rural urban fringe. The net result could well be that more agricultural land would be idle than under the existing 10 acre minimum.

It was felt that there was no simple answer to subdivision control in the fringe area. Many factors should be studied in more detail. However, despite the criticisms of 10 acres as a minimum size of subdivision in rural zones, it would appear that this has been relatively successful in preventing further indiscriminate and isolated urban sprawl.

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THE TEN ACRE SUBDIVISION IN MANUKAU CITY  
AND FRANKLIN COUNTY:  
A STUDY OF CHANGES IN RURAL LAND USE

*Author:*

T.J.A. Mawhinney

*Date Published:*

October 1974, University of Auckland.

*Objectives:*

The objectives were to:

- Describe the land use found on the "minimum subdivisions" within rural areas of Manukau City and Franklin County.
- Attempt to provide a general assessment of the farming land use of "ten acre lots" found at the time of land use survey.
- Discuss the characteristics of the spatial distribution and growth of "minimum subdivisions".
- Examine those conditions which influenced some landowners to subdivide their farms into minimum sized lots, together with the reasons which persuaded either individuals or groups to purchase these small rural subdivisions.
- Examine the consequences of subdivision of land into "ten acre lots" upon land use, not only within the confines of the area but also in relation to the community at large.

*Area Surveyed:*

The areas of Manukau City and Franklin County zoned Rural A.

*What/Who Surveyed:*

This study was based on the survey sample of 386 holdings containing 609 minimum lots (representing 94 percent of total number of "minimum lots" within the study area). The list of all owners of holdings was drawn up from the valuation slips of landowners provided by the Manukau City and Franklin County Councils. The term "ten acre lots" applied to those subdivisions which were surveyed after the counties Amendment Act 1961, and are between 4 and 8 hectares in size. The term "holding" referred to the lot or lots which may include other land not subdivided which was held by an owner or group of owners at one specific location.

*Type of Survey:*

Postal and personal - non-resident owners received a postal questionnaire and resident owners (62 percent of the total) were personally administered with the survey questionnaire.

*Who Did the Survey:*

T.J.A. Mawhinney.

Thesis in partial fulfilment of Degree of Master of Arts and Honours in Geography, Auckland University.

*Summary:*

In the study area it appeared that demand for small holdings decreased with distance from the urban centres. Most purchasers wanting "minimum lots" were employed in the urban area and therefore restricted in their choice of site by driving distance to work. Although "ten acre lots" had been purchased primarily for their potential for residential use or for investment, at the time of the survey, 89 percent of all purchased holdings were being used for farming of one type or another.

Less than 10 percent of all the holdings surveyed, which were used for farming, were full-time farms.

The main feature of part-time farming on "minimum lot" holdings was the relatively large proportion of holdings used for the rearing and fattening of sheep and cattle.

Nearly 40 percent of all the farmed holdings were leased. Leasing is a mechanism whereby land owners who are not dependent on their land for an income, or who are not interested in the land on a part-time basis may allow their land to be used to the mutual benefit of both themselves and the lessors as well as the lessee.

There was a great variation in the intensity of farming operations from one holding to another. The land use data collected in the study showed that most "ten acre holdings" were being used for farming and that in some instances the land was being more intensively used than before subdivision.

While overall the subdivision of land has generally brought a lowering in farm productivity per ha, land within "purchased minimum lots" was farmed more intensively, in terms of capital and labour inputs, than it was before subdivision. However, the operations on many part-time farmed holdings had become over-capitalised.

*Conclusions:*

The "minimum subdivisions" within the study area were essentially the landowners' responses to the demand by a non-farm, urban dwelling segment of the population for a small rural holding either for residential purposes or for investment, and in this sense they may be seen to represent extensions of the urban area itself.

To some extent threat of changes to the minimum size of rural subdivision from four hectares to 20 hectares has been responsible for some landowners dividing their land as an insurance against impending changes in legislation.

The subdivision of farmland, almost all of which was used for pastoral farming, has led to land use changes and changes in the type of farm economy and method of operation. Farming was still as important as before subdivision. It was the type of farm economy and method of operation which had changed with subdivision of the land and its sale mainly to non-farmers.

Although much of the land was used for part-time farming, or leased to full-time farmers, it was not necessarily under-utilized. In the future more of the residential owners of these holdings would attempt to derive a larger proportion of their income from farming activities. In many instances, capital investment per unit of land on these "minimum lot" holdings is more intensive than was the case before subdivision.

The "minimum subdivisions" in relation to the study area accounted for less than two percent of the total rural area and probably not more than four percent of the land used for agriculture.

The "ten acre lot" was probably having a greater effect than ever before on the rural communities of the study area. For instance, the "ten acre subdivisions" may well have helped maintain the greenbelts. The ten acre lot may well have served as an innovator providing an alternative to the quarter acre urban and suburban living.

The settlement of families from the urban area on "ten acre holdings" could well help prevent the decline in the local community services which some rural areas have experienced over the last twenty years through declining population.

The concluding statement of the study was that the most important aspect to be considered in the discussion of any aspect of "ten acre lots" was that they already existed and that therefore criticism of them should be constructive. Further study of the "ten acre subdivision" should endeavour to suggest ways in which this kind of development can be most satisfactorily utilized for the benefit of the community as a whole.

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SMALL RURAL PROPERTIES: THE EFFECT OF PART-TIME  
FARMING AND RESIDENTIAL USE ON AGRICULTURAL  
PRODUCTIVITY. A CASE STUDY IN THE RODNEY COUNTY

*Author:*

G.L. Cato

*Date Published:*

October 1978. University of Auckland.

*Objectives:*

The main objective of this study was to assess the impact of part-time farming and residential use of small properties on agricultural productivity. A number of former farm units which had been subdivided into smallholdings were studied in detail and an attempt was made to compare agricultural potential before subdivision with the production being achieved under part-time residential farming. The characteristics and motivations of property owners was also examined in an attempt to find some correlation between landuse and productivity.

*Area Surveyed:*

The Riverhead (Kumeu, Coatesville and Waitakere areas within Rodney County).

*What/Who Surveyed:*

Five former farm units, which had been subdivided into 60 smallholdings were surveyed. The units were at:

Riverhead/Kumeu - a 60 hectare town milk supply dairy farm subdivided in 1965 into 14 lots;

Coatesville - a 34 hectare dairy unit subdivided in 1969 into 7 lots - farmed as one until 1972;

- 78 hectares, use unknown, subdivided into 18 lots in 1969;

Waitakere - a 67 hectare sheep and cattle unit, subdivided in 1970 into 13 lots;

- a 46.5 hectare dairy unit, subdivided in 1968 into 10 lots.

The average size of all holdings was 4.7 hectares with two-thirds of the holdings having an area between 4 and 5 hectares.

*Type of Survey:*

Personal interviews plus postal questionnaires. Questionnaires were delivered to 55 of the 60 small lot owners (five properties were unused and the owners could not be contacted). In all, 53 questionnaires were completed.

All owners were interviewed briefly when the questionnaires were collected. Three of the five former farm owners were also interviewed.

*Who Did the Survey:*

G.L. Cato.

In partial fulfilment of requirements of Diploma in Town Planning, University of Auckland.

*Summary:**Owner and Property Characteristics:*

It was found that there were two broad categories of rural/residential dwellers - the part-time farmer, and the urban orientated rural resident/residential owner (who was generally less interested in farming and more strongly motivated by the rural lifestyle).

The rural residence as a permanent home was a predominant feature of both types of owner.

Most small lot owners were satisfied with the size of their property.

The total farm product, which took into account the residential use of smallholdings, showed a considerable increase by dollar terms in the intensity of utilisation. This was accompanied, however, by a substantial drop in foreign exchange earnings capability.

*Conclusion:*

The study showed that subdivision of high quality agricultural land into small holdings, did not result in a loss of agricultural potential, unless over-capitalisation in the form of an expensive residence resulted.

Flexibility (the ability to change from one land use to another at relatively short notice) appeared to be one of the greatest attributes of the smallholding.

The author felt that the evolution of the smallholding would continue and that the opportunity was there to guide the process in the direction which serves the best interests of the nation. For counties to achieve this guidance in their planning the following recommendations were made:



1. Restrict the size and/or value of residences which may be erected on smallholdings located on high quality soils and not being farmed as full time units.
2. Tie the above policy to a land capability classification.
3. Provide financial incentives to genuine small farmers.
4. Provide appropriate areas for rural/residential development.
5. Resist pressure for urban type services in rural areas.
6. Make use of alternative legislation and by-laws to encourage the proper utilisation of rural land.
7. The use of differential rating.

By a combination of some or all of these measures it should be possible to encourage proper utilization of the potential of small properties by a process of encouragement rather than force.

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RURAL SMALLHOLDINGS IN THE VICINITY OF AUCKLAND  
- A PILOT STUDY

*Authors:*

Warren Moran, with Bruce Burton, Wardlow Friesen, Hugh Jarvis and Ross McKitterick.

*Date Published:*

January 1979. Report to the Planning Division, Auckland Regional Authority.

*Objectives:*

This report attempted to correct some of the deficiencies in data for smallholdings in the Auckland region. Four main topics were explored:

1. The general characteristics of the holdings and the households living on them.
2. Travel behaviour of household members.
3. Attitudes of owners to the provision of services and to the minimum size of subdivision.
4. Productivity of the blocks.

*Area Surveyed:*

Five localities of the Auckland region:

Okura - Redvale	(Takapuna City and Rodney County),
Coatesville	(Rodney County),
Riverhead - Kumeu	(Rodney County)
Brookby - Whitford	(Manukau City),
Drury - Ramarama	(Franklin County).

*What/Who Surveyed:*

A sample survey of 71 households living on smallholdings in five localities of the Auckland region. For the purposes of this study, smallholdings were defined as parcels of land between one and ten hectares. Majority were 4 ha in size (average).

*Type of Survey:*

Pilot study, personally conducted.

Sample survey - 71 households interviewed over four weekdays during July with result that there may have been some bias in the nature of the properties and owners.

*Who Did the Survey:*

Participants in a graduate course in the Department of Geography, University of Auckland.

*Summary:*

The average size of holdings was four to six hectares. Smallholders had a distinctive demographic profile, the average family consisting of two or three children between 10 and 19 years. The land use of smallholdings and socio-economic character of occupiers varied from locality to locality. Definite intra-regional migration patterns existed.

Private motorcars were used almost exclusively by households. In general, trip times to work or to shop were not noticeably different from studies of urban residents. Shopping behaviour compared with urban residents was efficient. Travel behaviour demonstrated differences across different occupations, groups of socio-economic status, and therefore different localities where smallholdings were concentrated.

Sampled smallholders were generally content with services. A minority desired improvements in road, bus services, and rubbish collection. Little direct contact occurred between occupiers and local or Regional Authority officials. Fifty-nine percent of smallholders did not feel they received a return on rates equivalent to urban dwellers.

Fifty-four percent were content with the size of their holding (most of those who were not satisfied would have preferred a larger holding).

Seventy-seven percent of the sample stated that they would not subdivide if given the opportunity.

When both horticultural and pastoral holdings were considered, productivity was undoubtedly higher than if properties had remained in larger pastoral units. Average stocking rates for livestock compared favourably with average figures for North Island hill country and intensive sheep and beef farms. There was great variability in the stocking rates with several smallholdings achieving extremely high levels. Larger smallholdings tended to carry fewer stock per hectare. Higher stocking rates were associated with longer ownership of the smallholdings and use of farm advisory services.

*Limitations of the Study:*

The cluster sampling of smallholdings in five localities limits the extent to which results may be used for the region as a whole.

Some themes explored quite briefly in this study deserve more emphasis, for example the functioning of the horticultural and pastoral agricultural systems. More attention to the motives of owners for using their land productively or unproductively and to an improved explanation of smallholders' attitudes is necessary. This would involve more refined techniques, such as semantic differential approaches to questioning.

*Conclusions:*

Given the right management, these smallholdings across land of varying capabilities, can be highly productive even in pastoral use. The most productive of the smallholdings had livestock densities as high as the most efficient dairying areas in the country. It should be a priority to encourage and stimulate productive use by smallholders.

Throughout the study it emerged that there are two relatively distinctive groups of smallholders resident on the urban periphery - the full-time farmers (almost all horticulturists) and part-time farmers. As these two groups are distributed in very definite spatial patterns the planning response to the existence of smallholdings may need to be quite different within the various localities.

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## RURAL SMALLHOLDINGS IN THE AUCKLAND REGION

- Volume 1: Summary of Conclusions, Project Design,  
2: Smallholdings and Smallholders,  
Distribution Use and Demography,  
3: Motivation and Travel Behaviour,  
4: Agriculture and Productivity.

*Authors:*

Warren Moran, Warwick Neville, David Rankin, Ross Cochrane.

*Date Published:*

- Volume 1: July 1980  
2: February 1980  
3: April 1980  
4: April 1980.

A report to the Planning Division, Auckland Regional Authority.

*Objectives:*

One of the main aims of this research was to correct deficiencies of a pilot study for the Auckland Regional Authority (Moran, 1979) - such deficiencies included the small size of the sample and the restricted part of the Auckland Region surveyed - as well as to collect additional and more refined data to answer some of the questions proposed in the original research, and extended during the discussions of the pilot study.

*Area Surveyed:*

The Auckland Region, not including Takapuna City, the offshore islands or Northern Awhitu Peninsula. In Rodney County, sampling was restricted to Kumeu and Wainui Ridings.

*What/Who Surveyed:*

A randomly selected 7.5 percent sample of the smallholdings within each riding/ward in the region.

The population of smallholdings was defined as all parcels of land greater than one hectare and not larger than 10 hectares, and held in separate title within specified parts of the Auckland region. These were identified from the cadastral series (NZMS.261) and their existence

as separate titles, and their area, verified from local authority rating files.

<u>County</u>	<u>Population</u>	<u>Sample</u>
Rodney County (Kumeu and Wainui Ridings)	1220	69
Waitemata	810	44
Manukau City	640	35
Franklin County	1840	87

*Type of Survey:*

Personal.

High response rate with fewer than 10 percent refusing to cooperate.

*Who Did the Survey:*

Staff and graduate students of the Geography Department, University of Auckland, under the leadership of Warren Moran.

*Summary:*

Volume 2: Smallholdings and Smallholders,  
Distribution Use and Demography.

1. The average size of smallholdings was 4.6 hectares and the modal class was 4 to 5 hectares. Smallholdings were found to be unevenly distributed in the Auckland region. The uses which occupied smallholdings were also unevenly distributed throughout the region. Pasture was the dominant land cover on over 75 percent of the properties. However, non-pastoral activities provided the main income to the holding on over half of the properties.
2. Smallholders were a distinctive group of households characterized by adults in their 30's with school-age children. These characteristics implied that services required by the smallholder community were those for families. The dependency burden in families was a modest one, because adults of working age were strongly represented. The majority of smallholders were of European derivation, mainly New Zealand born, although the Chinese were a large minority (about 17 percent).
3. The smallholder population was found to be active in economic and educational terms with, on average, higher educational qualifications and a high degree of female participation in the labour force. Overall the smallholder households emerged as enterprising and hardworking.
4. In many respects the smallholder population was a demographic rural-urban hybrid.

The smallholdings attracted people with strong urban affinities but definite preferences for rural living. The majority of smallholders had urban origins as they had recently moved from their previous residence to present property. Young adults were moving off smallholdings in the process of marrying, finding work, or moving closer to places of employment. However the continued presence of some older teenagers and young adults suggested that for some, living in this environment has a conditioning effect that establishes preferences of lifestyle and work which favour continued residence.

Volume 3: Motivation and Travel Behaviour.

1. Both full-time and part-time smallholders had a basic family orientated motivation to live in a rural environment. In more recent years, the motives to live off the land and to grow and sell horticultural crops had received an increased relative support.

The spouse remained the major influence on the decision to purchase a specific property, with the source of loan finance and the advice of relatives and friends featuring as secondary factors.

Many smallholders working part-time on their properties were working towards their full-time employment on the property. Some full-time smallholders who were initially part-time, had achieved full-time status at the time of the survey.

2. There was general satisfaction with the provision of public utility services, but there was greater demand for sealed roading and telephones in areas where they were not currently provided, and a low provision but high demand for inorganic rubbish collection in Rodney and Franklin Counties.
3. Car ownership levels were high, with 94 percent of households having access to at least one car. Two-thirds of the households definitely asserted that daily travel presented no problem, and only 7 percent found it was a considerable problem. 14.5 percent of households in the sample had pre-school children and 21 percent of these experienced problems of access to pre-school education facilities.
4. The average number of yearly trips to central Auckland was 10 for the senior male, and 6.5 for the senior female. Shopping trips emerging from the house were mainly to the nearest major commercial nucleus. 92 percent of males and 90 percent of females travelled to work by car, and mainly as single occupant drivers with hourney times averaging 25 minutes for the senior male, and 23 minutes for the senior female.

## Volume 4: Agriculture and Productivity.

1. Smallholdings were mainly located on land of relatively high capability. The smallholdings operated by full-time farmers were mainly found on land of higher quality than land used by part-time farmers. Specific land uses were associated with land of particular qualities, with most horticultural properties on high quality land. Smallholdings not used agriculturally were generally on land of low quality. Orcharding and viticulture were a partial exception to this generalization. Pastoral farming was distributed relatively evenly across land of different qualities.
2. The dominant land use was the grazing of livestock, with the smallholdings engaged in this use operating mainly as fattening units. Twenty percent of stock on smallholdings had been bred on the property. Stocking rates on smallholdings were similar to those on all farms in the Auckland region although great variability existed among smallholdings and there were substantial differences in stocking rates on land of different capabilities. It was hypothesised that further variations would also result from the aspirations, abilities, knowledge and financial circumstances of the occupiers.

Improvement in information sources available, and the motivation of smallholders by more innovative use of rating legislation, may improve productivity of pastoral smallholdings. Smallholders were generally positive in their plans for future livestock production, with 40 percent intending to increase their stocking rates.
3. Great diversity existed among the holdings that practice horticulture. Full-time horticultural holdings produced gross incomes several times higher than both factory and town supply dairy farms, and although part-time horticultural smallholdings were much less productive, gross incomes still compared favourably with pastoral farming in the region. The marketing outlets used by horticultural smallholdings were not greatly different from other holdings in the region. In the future, horticultural activities could probably become more common on smallholdings.
4. Both men and women living on smallholdings made large labour inputs to their properties. Smallholders had carried out a wide range of improvements to their properties with fencing and building being the most common.
5. Problems distinguished by smallholders included physical environment problems, lack of available finance and shortage of time to work on the property.
6. One-third of smallholdings carried no first mortgages. Eighty-nine percent of the holdings have less than 40 percent of the value of their property in loans.



7. It was suggested that local and regional authorities, in cooperation with departments of central government, should encourage and stimulate the effective use of existing smallholdings. Although smallholdings were producing at reasonable levels, their potential was far from fulfilled.

*Conclusion:*

Given the main results as summarised above, the authors suggested that consideration should be given to formulating policy on at least the following issues:

1. **Monitoring Supply and Demand:**

Any future liberalization of subdivision restrictions to permit smallholdings need not be in the haphazard fashion of former legislation, but should ensure a range of sizes to suit the needs of different activities on different qualities of land.

2. **Manpower Planning:**

Consideration of the role of smallholdings in the rural economy and society suggests the need for a rural manpower policy in the region. The potential of the development of smallholdings to revitalise the rural area and increase rural and small town employment, should be recognised in planning.

3. **Travel Efficiency:**

Improved configurations between residences and employment nodes, together with appropriately routed public transportation, could improve the efficiency of movement in the region.

4. **Increasing Agricultural Productivity:**

As a group, smallholders cannot be labelled as unproductive compared with conventional livestock farmers. Nevertheless, there exists large variability in their productivity. The Authority should consider its potential role in raising the overall level of productivity and use of rural land in the region.

5. **A Positive Approach to Smallholding:**

Smallholdings exist in the Auckland Region. They may be viewed either negatively as a problem, or positively as a resource of the region to be managed more effectively and to contribute to the diverse needs of a population with many different aspirations. After visiting all localities in which smallholdings exist, and interviewing a large number of smallholders, the strong impression emerging to the authors is of an active community, by far the majority of whom are attempting to manage their land to maintain or increase its production.

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LAND USE SURVEY OF SMALL RURAL PROPERTIES  
(1 ha to 6 ha)

*Author:*

Planning Department, Tauranga County Council.

*Date Published:*

January 1980. Tauranga County Council.

*Objectives:*

To obtain an appreciation of the use to which properties between 1 ha and 6 ha in the County were being put.

*Area Surveyed:*

Tauranga County:

Katikati Ward  
Te Puna Ward  
Waimapu Ward  
Te Puke Ward  
Maketu Ward.

*What/Who Surveyed:*

A land use survey of those properties with areas between 1 hectare and 5.999 hectares. The survey covered total holdings as per Computer Roll (1,369) less those not applicable (159), less those on Matakana Island (43).

*Type of Survey:*

Not specified whether postal or personal.  
Total number surveyed was 1,071 which was 92 percent coverage of the County.

*Who Did the Survey:*

Miss L. Miles and Miss J. Fallwell from Massey University, under the direction of Mr R. Ade, Senior Planning Officer.

*Summary:*

1. Distribution was spread throughout the County with the bulk of properties in the Te Puna, Waimapu and Te Puke Wards.
2. 26 percent of properties were in the 1 to 2 hectare range.  
27 percent were in the 2 to 4 hectare range.  
47 percent were in the 4 to 6 hectare range.
3. There were 48 percent of these properties in pasture with the balance being principally in horticulture. The breakdown

The breakdown of the pastoral uses (on a percentage of total lots basis) was:

Cattle or sheep	45%	Poultry	10%
Horses	12%	Shelter (young)	30%
Pigs	2%		

Similarly, for horticultural uses:

Citrus	39%	Avocados	6%
Kiwifruit	36%	Glasshouses	3%
Berry fruit	2%	Nursery	3%
Stone & pip fruit	6%	Vegetables	3%
		Others	<1%

4. It appeared that 77 percent of these holdings were operated as independent units.
5. While most of them had dwellings (88 percent), in the main, most had only one dwelling. The dwellings themselves varied in age.
6. Maori ownership accounted for 22 percent of the total, with 43 percent of this in the Maketu Ward and 30 percent in the Te Puke Ward.

*Conclusions:*

No conclusions were drawn by the authors of the study. The reader was provided with tables and left to draw his own conclusions.

A  cursory look  at the tables to draw any conclusions about land use and productivity would suggest the following:

1. Using averages for size divisions, the area covered by the properties surveyed is approximately 3,810 hectares. Of this total, the area occupied by "houses plus gardens" (i.e. "non-productive" uses c.f. pasture/horticulture/or a combination) is 192.5 ha or 5 percent of the total. Since it cannot be assumed that gardens are unproductive it must be concluded that most land is used productively to some extent.

2. Of the total area of 3,810 ha, 2,815 were occupied by properties growing some type of horticultural crop.
  3. Given these rough figures, it appears that unproductive small-holdings (with land being unused or simply in grass) were not the rule in the area but rather a small minority.
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## SURVEY OF SMALL RURAL LOTS

*Author:*

Town Planning Department, Rotorua District Council.

*Date Published:*

Unpublished Survey, Rotorua District Council, 1980.

*Objectives:*

To gain a more accurate knowledge of small rural lots and an understanding of this sector of rural properties. Aims of the survey were as follows:

1. To find out how much land has been subdivided into small rural lots and where these lots are situated.
2. To find out what such land is being used for and the intensity of any rural land use.
3. To ascertain the potential of such land for rural production and to see how this compares with the actual use.
4. To get some idea of how well the existing small lots are satisfying the demands of their users for a variety of activities.
5. To get an idea of the availability and demands for urban services.
6. To draw some conclusion as to the actual and potential effects of close rural subdivision on land use.
7. To provide a basis on which to evaluate rural land use policy, in particular that relating to small rural subdivisions.

*Area Surveyed:*

Rotorua District.

*What/Who Surveyed:*

Potentially productive units between 0.4 hectares and 10 hectares were surveyed, amounting to just over 500 in total. These were taken from the District's valuation rolls.

*Type of Survey:*

Postal.

Number of questionnaires sent was just over 500, and response rate at date of writing was around 45 percent.

*Who Did the Survey:*

Town Planning Department, Rotorua District Council.

*Summary:*

1. A relatively high proportion of rural lots were unoccupied - around 50 percent surveyed had a house on them.
  2. The area of the surveyed lots comprised about one percent of the productive land resources of the district. A very small proportion of the subdivided lots was being used extensively, though the potential existed for more profitable use of much of the land concerned. There was a significant relationship between the more productive land and the location of small rural lots. However, the distribution of lots was also related to proximity of urban areas, lakeside settlements and in the instance of Mamaku, the township itself.
  3. A very small proportion of the subdivided lots was being used as the sole support for the occupying household, although less than half of the income earners of occupied properties commuted to work in the urban area. A significant proportion (around 20 percent) of occupiers of the small rural lots were employed in the rural areas.
  4. There appeared to be a substantial proportion of occupiers of small rural lots who saw the rural environment as preferable to urban living, without wishing to be part of the farming economy.
  5. Most of those surveyed were satisfied with the size of their property. However, of the full-time farmers (who comprised less than four percent of the total surveyed) a relatively high proportion (40 percent) would have preferred larger units.
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A STUDY OF GRAPE GROWING ON SMALLHOLDINGS  
- ECONOMIC AND SOCIAL IMPLICATIONS

*Author:*

M.W. Gaddum

*Date Published:*

Unpublished dissertation, Massey University. 1979.

*Objectives:*

1. To outline the basic characteristics of the population growing grapes on smallholdings.
2. To make an economic evaluation of grape growing on smallholdings.
3. To ascertain the vulnerability of these people to market fluctuations and their ability to change.
4. To outline the relationship between the major components of the industry (growers and companies).
5. To obtain an indication of the intensity of land use.

*Area Surveyed:*

Poverty Bay Flats; Cook County - Gisborne.

*What/Who Surveyed:*

The study area had 16,000 ha of fertile soils of which 12,000 ha were suitable for vineyard/horticultural crops. At the date of the survey, there were 124 grapegrowers. Of these only those on properties between 0.8 ha and 10.0 ha were surveyed. This gave a population of grapegrowers on smallholdings of thirty.

*Type of Survey:*

Postal.

Population amounted to 30 growers and a response rate of 73 percent was achieved.

*Who Did the Survey:*

M.W. Gaddum. The study was a dissertation in partial fulfilment of a Bachelor of Agricultural Science (Honours) degree, Massey University.

*Summary:*

1. More than half of the surveyed grape growers on smallholdings were full-time farmers and the majority of them planted grapes for the economic returns they gave.
2. The results showed that the smallholders were all fairly well off, tended to actively farm their properties and needed little outside labour or machinery help. The gross returns per hectare were in the neighbourhood of \$14,000 per annum.
3. The grape growers followed the trends of the industry with regard to grape varieties. Only a minority of full-time farmers depended on grapes alone as an income source. Therefore most of these growers were not very vulnerable to market fluctuations.
4. It was clear that the smallholders, by themselves, had no influence on the industry, and that changes in their favour would only occur if there were advantages for all grape growers.
5. There was little ill feeling between growers and companies. One wine company at least, regarded these small grape growers as important contributors to the total production of the area.
6. All holdings in this survey were sited on good agricultural land and the land was used well. There were indications that land use intensity did not increase with size but rather that intensity was lower on holdings greater than 8.0 ha.

*Conclusion:*

The survey indicated that the small grape growers in the Poverty Bay Flats area made a worthwhile contribution to the national, as well as the local economy, that they made good use of the land resource, and that they were an accepted group within the locality.

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SMALL RURAL LOTS, A SURVEY AND COMMENTARY ON  
SMALL RURAL LOTS AND RURAL PLANNING IN  
TAUPO COUNTY

*Author:*

Peter Crawford.

*Date Published:*

May 1977. Special Report No. 3, Taupo County Council.

*Objectives:*

The purpose of this study was to examine both the number of small rural lots in Taupo County and to conduct an in depth analysis of a specified group of small lots.

The specific objectives were:

1. To determine the number and size of rural lots in Taupo County;
2. To establish the pattern of utilisation of small rural lots within Taupo County;
3. To comment on aspects of rural planning as they relate to the above mentioned objective.

*Area Surveyed:*

Taupo County.

*What/Who Surveyed:*

Small rural lots were surveyed. These lots were defined as those zoned Rural A under the Operative District Scheme. Small rural lots were classified as those rural lots of 1 to 40 hectares. The study concentrated on three selected areas of small rural lots - Centennial Drive, Link Road and Oruanui.

*Type of Survey:*

Postal survey and personal interviews. Questionnaires were sent out to 66 owners of farmlets. There were 53 replies. This study is a specific study rather than a study of the whole population of small rural lots.

*Who Did the Survey:*

Tony Kissick (undergraduate student, Massey University).

*Summary:*

## 1. Rural Environment:

The small rural lots and their occupiers had the following characteristics:

- (a) The people lived there because they enjoyed the rural environment.
- (b) Most lots were recent subdivisions and the majority was of a size class 2-10 hectares.
- (c) Over two-thirds of the owners were urban people and had urban occupations. About 25 percent of the wives worked full-time while a further 25 percent worked part-time.
- (d) A typical rural farmlot community consisted of a male owner over 35 years of age, working in the urban area, a working wife and children in the 10-15 year age group.

## 2. Rural Activity:

- (a) Most owners had the specific objective of using the land for rural purposes. This concern was evidenced by the fact that six out of every seven farmlot owners consistently applied fertiliser to their land and that all owners were very aware of the need for subdivisional fencing.
- (b) The variety of production enterprises was limited by the small size of the local market.
- (c) Many of the farmlot owners indicated an awareness of the "small farmlot problem" and the need for productivity.
- (d) There was evidence of real nuisance problems on a rural scale.

## 3. Levels of Utilisation:

Two questions were posed here:

- (a) Do farmlots have the same, greater, or lesser carrying capacities than unsubdivided farms?
- (b) Are farmlots used as sources of short term investment and property sales?

The results of the study showed that carrying capacities on farmlots and adjoining farms were similar in terms of ewe equivalents. Further, it was also found that farmlots in the three areas studied were valued as units for permanent settlement and not mediums of financial exchange.

*Conclusion:*

With regard to production levels, it was argued by the report that until levels of carrying capacity are increased and specialist rural services to the local community are provided, it is more economically efficient to encourage farms rather than farmlets. As a general statement, farmlets in the three study areas were serving only to provide a rural environment for urban people. There were, however, specific exceptions to this rule and the role of these people is invaluable to both the rural and urban community.

With regard to rural planning, the report stated that the survey had shown that not only were the existing planning ordinances deficient in promoting rural production, but also that levels of utilisation on small lots appeared to vary considerably with no marked emphasis on productivity. The report went on to state that in considering objectives and policy as to rural planning, there was a fundamental principle which emerged from the study and which should provide a guide. This principle was that "where a rural use will increase the level of rural production from that land, and such increased production is either in the local, district or national interest then that use should be promoted in the general public interest".

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THE GEOGRAPHY OF SMALL RURAL FARMLETS:  
A CASE STUDY OF THE HAWKES BAY RURAL 'B' ZONE

*Author:*

Murray John Seator.

*Date Published:*

Unpublished thesis, 1978, Massey University.

*Objectives:*

The main objective was the investigation of the patterns of land-use in the urban/rural fringe on an expanding urban area (the Heretaunga Plains).

Part one of the study was concerned with the social geography of the farmlet occupiers particularly the relationships between distance and facilities, and distance and location. Part two consisted of a land use study, with particular attention given to land use and size of property.

*Area Surveyed:*

Heretaunga Plains (Hawkes Bay Rural 'B' zone), 34,400 hectares.

*What/Who Surveyed:*

A random sample of 392 (20 percent) of the farmlets between 0.8 and 10.0 hectares in size shown on the Valuation Department records for Hawkes Bay County. A farmlet was defined as a zoned rural residential holding of between 0.8 and 10.0 hectares in area, which is used by a person or household as a full-time home.

*Type of Survey:*

Postal.

163 usable replies received (a response rate of 41.58 percent).

*Who Did the Survey:*

Murray John Seator, in partial fulfilment of requirements for the degree of Master of Arts in Geography, Massey University.

*Summary:*

1. The majority of farmlets were located around the periphery of the urban area, with the smaller size properties nearer to the urban areas. Those living on the farmlets enjoyed the same day-to-day services and facilities of their urban counterparts, but also enjoyed the benefits associated with living in a rural environment, even though they did incur higher transportation costs.
2. The desire for residence in a rural environment was the reason given by the majority of owners for farmlet purchase. The bulk of farmlet owners had occupations unrelated to agriculture. Only 20 percent earned a living by working full-time on the farmlet, while 10 percent were retired.
3. The area used for housing purposes by the farmlet occupiers, was found to be greater than for urban and suburban dwellers.
4. Farmlets were characteristically diverse in their farming activities. It was found that market gardening, orcharding, process cropping and pastoral activities (with the exception of dairying) occurred on farmlets of all sizes. Although the significance of pastoral activities to the farmlet economies is considerably less than for market gardening, orcharding and process cropping, the intensity of use in pastoral activities was higher than in Manawatu (Chiu, 1975) and Taupo (Crawford, 1977).
5. Intensity of land use was found to be related to the size of the farmlet and occupation of farmlet owner. In general, yield per hectare increased with size of farmlet, and was higher where the farmer worked full-time on the farmlet. Although land use intensity was greater than in Manawatu and Taupo, there was still a reduction in the intensity of use on the farmlets of the rural 'B' zone, as 80 per cent were either farmed part-time or not at all.

A land use pattern emerged, in which location and size of farmlet were related to the distance from the urban area, as well as to the intensity of use the farmlet was put to, which was itself influenced by the occupation of the farmlet owner. The factors that influenced the land-use pattern were found to be social and economic rather than physical.

The majority of those farming part-time did so by choice, not by need and they did not appear interested in subdividing their farmlet for future gains.

*Conclusion:*

Part-time farming or 'rural-urbanisation' was creating a 'peri-urban' zone around major urban areas, due in part to our highly mobile and affluent society. There appeared to be many reasons why a person may desire to live in a rural environment not the least common being to 'get away from the city'. It was found in this study that 57 per-cent of all farmlet owners bought their farmlet because they preferred rural living to urban living.

The author noted that 'rural-urbanisation' appeared to be on the increase in the Hawkes Bay rural 'B' zone. It appeared that farmlets used for part-time farming satisfied a need for a section of society in that they provide a lifestyle associated with farming and a rural environment enjoyed by them without the implication of full-time farming.

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## A STUDY OF RURAL SMALLHOLDINGS IN TARANAKI COUNTY

*Authors:*

A.D. Meister and D.S. Stewart

*Date Published:*

1980. Discussion Paper in Natural Resource Economics No. 3,  
Massey University.

*Objectives:*

1. To identify the general characteristics of smallholdings and smallholders, in the specified area.
2. To establish the current pattern of land utilization on smallholdings in the area, and to obtain information on any proposed changes in land use, affecting this pattern.
3. To get an indication of the productive characteristics of a specified sample of smallholdings.

*Area Surveyed:*

Glenavon-Katere and Bell districts in Taranaki County.

*What/Who Surveyed:*

A random sample of sixty smallholdings, representing 67.4 percent of the total smallholders population. Smallholdings were defined as those holdings between one and ten hectares that are classified as agricultural by the Valuation Department. Property sizes ranged from 1.5 to 9.8 ha.

*Type of Survey:*

Postal.

Useable replies were received from 41 of the 60 smallholders contacted.

*Who Did the Survey:*

Miss D.S. Stewart, Bach.Agr.Sc. (Hons.) student, Department of Agricultural Economics and Farm Management, Massey University.

*Summary:*General Characteristics

1. Mean smallholding size of population sampled was 5.1 ha with predominance in the smaller (1.0 - 3.9 ha) size class.
2. Area of properties not available for production purposes ranged from 0.05 - 1.5 ha. Mean non-productive area of 0.42 ha.
3. Majority of investigated properties farmed by owner.
4. Majority of owners operated properties on part-time basis with other employment away from property. Full-time owners generally operated either commercial poultry or intensive horticultural units.
5. This study (unlike similar studies in Auckland vicinity and Paparua County, Christchurch) did not indicate predominance of urban-based occupations.
6. Most smallholdings were used in part for residential purposes, and therefore could be said to generate a "residence product".
7. Reasons given for acquisition or leasing suggested smallholdings in the area were generally used to pursue interest in agricultural/horticultural activities, and provide opportunity for rural living, and as means for capital gain.

Land Utilization

1. No evidence that available land was not utilized.
2. Pastoral activities dominated land use in terms of area used. Diversity in production activities was characteristic of holdings in each size class. Land was used for some pastoral activity on virtually all smallholdings, but this land use served as the main source of income on less than half the properties studied.
3. Nearly half the smallholders intended to either intensify present activities or to diversify, particularly to horticultural activities, within the next few years.

Labour

1. Smallholdings provided casual or seasonal employment.
2. Intensive horticultural or nursery units could provide full-time employment for a limited number of people.

Productivity Characteristics

1. Overall productivity achieved from smallholdings studied was higher than that achieved from large scale pastoral production.



2. The stocking rate for smallholdings running pastoral livestock was, on average, similar to that on larger scale pastoral farms in the area (approximately 15-18 stock units/ha).
3. There was extreme variability in stocking rates but average figures suggested a decline in intensity of pastoral activities as size of smallholdings increased.
4. It could be generally said that the productivity of horticultural activities (measured by income per acre) was considerably higher than any type of pastoral activity that occurred in the district.
5. Land use intensity decreased as holdings became larger.

*Conclusions:*

Overall productivity is almost certain to increase if subdivision of pastoral properties into smallholdings (1-10 ha) is allowed. Evidence from the study suggested that the minimum subdivision standards specified, as to what area may constitute a minimum "economic unit" for the various activities, would in fact be restricting total productivity from the land.

It is possible to cite specific examples from this study where pastoral farming on areas considerably less than twenty hectares could be considered "economic". Undoubtedly, the specified minimum subdivision of six hectares allowable for land to be used for berry fruit and kiwifruit grossly overstates what may constitute a "minimum economic unit" for these activities.

Such standards for subdivision bear no relationship to the land or its productive ability and are biased against part-time farmers. No specific analysis of productivity achieved on various classes of land was made in this study.

The limited scope of this study does not allow for any definite conclusions on gross or net output. Therefore it cannot be shown that the smallholdings studied produce "economic output levels". Even though stocking rates compare well with the district's average, input levels per unit of output may/or may not be higher than in larger scale farming.

The facts however, that the average stocking rates are similar to district figures, that many properties are used for very intensive enterprises, and that labour is often provided very cheaply, leads to the conclusion that, on average, the land occupied by smallholdings is used in a desirable way (from a regional as well as national point of view).

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THE ECONOMIC IMPLICATIONS ASSOCIATED WITH PART-TIME  
FARMING ON RURAL SUBDIVISIONS,  
A CASE STUDY IN THE MANAWATU

*Author:*

Boo Keng Chiu

*Date Published:*

Unpublished thesis, Massey University, November 1975.

*Objectives:*

The main objective was to investigate both how the land is used and to what intensity it is farmed on the rural subdivisions in the Manawatu.

The four sections of the questionnaire considered:

1. the housing amenities and farm improvements, if any, made on the farm since the purchase;
2. the documentation of agricultural land use;
3. the documentation of the characteristics of part-time farmers;
4. mortgage requirements, the income and expenditure of the part-time farming enterprise, together with additional comments the respondent wished to make.

*Area Surveyed:*

Manawatu area within the boundaries of Kairānga and Oroua Counties.

*What/Who Surveyed:*

Sample survey of 163 rural subdivisions owned by part-time farmers in the Manawatu. The total area of respondents' properties was 1,648 acres. Properties ranged in size from 5 to 81 acres with an average size of 15.8 acres.

*Type of Survey:*

Postal and personal (telephone).  
106 of the 163 owners contacted responded (73 percent).

*Who Did the Survey:*

Boo Keng Chiu.

Thesis in partial fulfilment of Degree of Master of Agricultural Science at Massey University.

*Summary:*

The main reason given by respondents for farmland purchase was the part-time farmers' motivation to be located in a rural environment.

The bulk of part-time farmers had occupations unrelated to agriculture. While the traditional farming of sheep and cattle was predominant amongst part-time farmers, a wide range of farming activities was encountered in the survey (ranging from a system of leasing the farm to an intensive horticultural unit requiring expertise and equipment).

Participation of family members in the farm work would appear to indicate the recreational nature of part-time farming.

Arrangements to lease or let part of the land farmed by the part-time farmer does not mean that subdivided dairying land would be lost to dairy production.

Grazing arrangements, policies and management systems to complement part-time farming with commercial farming activities warrant further research.

*Conclusion:*

That part-time farming associated with rural subdivisions in the Manawatu is wasteful of farmland was not substantiated by the results of the survey. The survey found that on both subdivided land suitable for dairying and sheep/cattle farming, the agricultural land use intensity after subdivision was higher. This is indicative of a potentially higher agricultural production that can be achieved by part-time farms.

Rural subdivisions used for part-time farming satisfy a need for a section of society for a lifestyle associated with farming, a rural environment enjoyed by them without the implication of full-time farming.

A positive approach would be to design the accommodation of agriculture, housing, lifestyle and recreation instead of an inflexible attitude for the preservation of agricultural land.

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## LAND USE OPINION SURVEY

*Author:*

R.J. Campbell

*Date Published:*

Unpublished survey presented for Kellog Rural Leadership Course, 1980.

*Objectives:*

To ascertain the attitudes of the silent majority to land use and rural living so as to formulate ideas to be incorporated in future changes to Council's District Scheme if found necessary.

*Area Surveyed:*

Eastern Riding of Oroua County.

*What/Who Surveyed:*

A random selection of 48 land owners from the valuation roll. Holdings ranged in size from 2 hectares to 324 hectares.

*Type of Survey:*

Personal.

Forty-eight land owners were randomly selected from the Valuation Roll. The role contained 486 land owners in the riding. The questionnaire was answered by 37 land holders.

14 holdings surveyed were under 20 hectares.

23 holdings surveyed were above 20 hectares.

*Who Did the Survey:*

R.J. Campbell, Member of Oroua County Council,  
Chairman, Town and Country Planning Committee.

*Summary:*

Of the 37 farms surveyed, the size range was as follows:

Up to 20 ha	20 - 100 ha	Over 100 ha
14 (38%)	10 (27%)	13 (35%)

Only 43 percent of land owners received their principal income from their holdings and 45 percent received less than 40 percent of their income.

Because of transport costs, a large number of people would not buy small holdings further from the city.

Land use was of traditional methods, in that sheep/beef/dairying were predominant. Many suggested horticulture could increase productivity but there was little evidence that it was taking on in any quantity in the area.

Lack of finance was an inhibiting factor to achieving more production.

A majority (68 percent) believed it was the responsibility of the land owner to use the land to its full productive use. A large percentage believed smallfarmers have a role to play in the county but did not believe more small units were necessary. It was considered that land should not be divided further in the area without good reason and planning mistakes of the past should not be escalated.

The survey showed that few believed the smallfarmer should work the land full-time, and a surprisingly low number believed that their principle occupation should be rural based.

*Conclusions:*

The conclusions were included in the summary. However, the author did make some recommendations with regard to subdivisions for smallholdings. These were that subdivisions of 40 hectares should be permitted as of right, while subdivisions of less than 40 hectares should be assessed on their merits in accordance with the objectives of the scheme statement.

Further provision must be made to allow and encourage rural workers to own their own land and house where none are readily available.

Also, provision should be made in very selective areas on land that is second rate for farming purposes, for areas up to one hectare as sites for rural residential living.

SMALLHOLDINGS: NET CONTRIBUTORS OR A COST  
TO THE COMMUNITY: A STUDY IN OROUA COUNTY

*Authors:*

M.J. Arthur-Worsop; A.A. Shepherd and I.M. Ritchie.

*Date Published:*

August 1981. Discussion Paper 13/81, Economics Division, Ministry of Agriculture and Fisheries.

*Objectives:*

The study was carried out to provide some updated information on smallholdings in Oroua County with particular reference to district planning implications.

The specific objectives of this study were:

1. To identify the demographic and social characteristics of smallholders and tenure of smallholdings in Oroua County.
2. To establish current patterns of land utilization on smallholdings in the county.
3. To obtain a measure of the productivity of smallholdings in the county, and to compare this with similar measures of productivity on large scale pastoral farms.
4. To establish the demand from smallholders for services provided by central and local government.
5. To obtain an indication of the contribution made by smallholders to the social life in the county, and to their use of rural services.

*Area Surveyed:*

Oroua County, Manawatu.

*What/Who Surveyed:*

Smallholdings in the Oroua County were defined as holdings between 0.4 and 20 hectares that were classified by the Valuation Department as agricultural, residential or vacant. The upper limit of 20 hectares was used because this was the minimum area for subdivision in the old district scheme. The sampling frame was the Valuation Roll with its associated Land Use Data File. Smallholdings that were identified as being owned or operated in conjunction with a larger property, were omitted from the total population.

*Type of Survey:*

A postal survey. The total population of smallholdings surveyed as defined above was 294. The response to the survey was poor and only 79 usable responses were obtained. This study should therefore be considered a specific study pertaining to these 79 properties only. While these properties are representative of the total population in terms of their size distribution, it cannot necessarily be inferred that they are representative in terms of land use, or in terms of associated social and demographic characteristics of smallholders.

*Who Did the Survey:*

New Zealand Association of Smallfarmers conducted the survey, while the results were processed by the Economics Division, Ministry of Agriculture and Fisheries.

*Summary:*

1. The majority of smallholders operated properties on a part-time basis and had other employment away from their property. Love of country life was the most important reason cited by smallholders for small farming.
2. Grazing was the predominant land use but there was evidence of an increasing amount of land devoted to horticulture. In general terms, smallholders were, on average, farming their properties as intensively as the rest of the county.
3. There was an indication, at least for this sample, that productivity (measured by stocking rate) was greater on smallholdings than on larger pastoral units in the county.
4. There was little demand for services other than those already supplied.

*Conclusion:*

It is possible for productivity to increase if subdivision of pastoral properties into smallholdings is allowed. The evidence of an increasing amount of land being devoted to horticulture points to an increase in the overall land value productivity.

The claim that land is wastefully used by smallholders for residential purposes cannot be supported. Costs of services per household serviced will be reduced, as the impact of smallholders is to allow the costs of existing services to be spread over a larger number of people.

In the light of the above conclusions, it would appear that the subdivision controls introduced into Oroua County's District Scheme Review No. 1 are unnecessarily restrictive.

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## SMALLHOLDINGS IN OROUA COUNTY

*Authors:*

Porter and Martin.

*Date Published:*

August, 1981.

*Objectives:*

Purposes of the study:

- To provide a basis for reconsidering the ordinances controlling rural subdivision.
- To consider the implications of permitting the extension of rural subdivisional rights for part-time farming.
- To consider the implications of permitting the erection of dwelling houses on sites not meeting present subdivisional requirements.
- To frame any proposed changes to the district scheme.

Objectives of the survey:

1. To investigate the degree and intensity of utilisation of smallholdings as productive units and the potential of such units to increase or diversify their output.
2. To examine the role that smallholdings play in the economy of the County.
3. To investigate the intention of smallholders to develop and productively utilise their holdings.
4. To establish guidelines for smallholders for the development of holdings in various land uses and to indicate sources of aid and advice.
5. To investigate the social structure of households resident on smallholdings.
6. To investigate patterns of employment, education, mobility and access to services.
7. To investigate their relationship with the wider farming and urban communities of the County.
8. To investigate the expectations that these households have in regard to their lifestyle.

*Area Surveyed:*

Oroua County.



*What/Who Surveyed:*

A random stratified sampling technique was used to select a sample of part-time farming smallholders. The sample was 105 properties. However, as the response to a questionnaire sent was low (no information about the response rate was given), this survey was followed by an interview survey of smallholdings in the Eastern Riding, each of which was in separate ownership. The two samples were pooled to provide the data base. The total area covered by the smallholdings was 277 hectares, giving an average gross area of 5.23 hectares.

Data from a survey of full-time farming operations carried out at the same time as the postal questionnaire, was retained as a benchmark.

The report also modelled a part-time farming operation for a five hectare block and examined as well a hypothetical subdivision of a 100 ha sheep unit into twenty-five hectare blocks.

*Who Did the Survey:*

Porter and Martin, Regional Planning Consultants.

*Summary:*

1. The smallholding population showed particular characteristics which differentiated it from the rural population of the district as a whole. There was an under representation in the 0-4, 20-29 and the 60+ age groups, and an over representation in the 30-39 and 40-59 age groups. There was a predominance of professional, technical and managerial occupations, with a significant female participation rate in the workforce.
2. Seventy-four percent of children were less than 20 minutes travelling time from school. Travel to work times were comparable, with 74 percent less than 20 minutes, and 53 percent less than 15 minutes. However, 22 percent of travelling times were greater than 25 minutes. The bulk of smallholdings were located within 15 minutes of the nearest shopping facilities. But shopping patterns were influenced more by commuting patterns than distance to shops.
3. Out of a labour force of 75, 73.4 percent spent less than the mean of 26 hours working on the property. Therefore, less than one labour unit per week was spent operating the small farm.
4. Total capital investment was much higher on the smallholdings than on largeholdings.
5. The smallholding economy was based on pastoral farming. Seventy-eight percent of respondents carried out pastoral farming, either as a main or a secondary land use. The average

stocking rate on smallholdings was 13.6 stock units per hectare. However, the variability of stocking rates was quite marked. Twenty-two percent ran less than five stock units per hectare, yet 67 percent ran over 10, and 25.6 percent ran more than 20 stock units per hectare. Seventy-five percent of largeholdings ran between 10 and 20 stock units per hectare.

6. The data showed that the largeholding was three times more cost efficient both in terms of unit area and stock unit carried.
7. Diversification into horticulture or cropping had occurred to a limited extent only, but potential did exist and could result in a more efficient and profitable use of the land in the long term.
8. The major constraint on productivity was believed to be economies of scale, compounded by lifestyle objectives (which were the major factor in the choice of a smallholding) and a learning period for stockmanship and managerial skill.
9. When the subdivision of a hypothetical 100 ha sheep farm into smallholdings was modelled, the net opportunity cost over nine years was \$168,000.

Possible new provisions:

Although no specific changes to current policies were recommended at this stage, the following new provisions were suggested.

1. Consideration of a subdivision ordinance that permits the subdivision of areas for a range of high value crops that could ultimately be developed as full-time units in accordance with the known capability of the land.
2. The creation of a special zone for part-time farmers in rural residential allotments.
3. Smallholdings to be made available in the hill country, on land of lesser value and lower soil classes for persons wishing to make a career out of farming but who lack either finance or expertise.
4. Consideration be given to the cutting out of an area surplus to the requirements of a large farm, or to the cutting up of a unit that had become uneconomic and part only of which was to be sold to an adjoining owner.
5. Possible rewriting of the present ordinance for the subdivision of rural land for farming purposes to drop the term "economic farming unit" if this is desired.

*Conclusion:*

Although no conclusion was provided in the study, the following extract from the study, outlining the basis for possible new provisions, does sum up the findings of the study and the philosophy for rural subdivision.

"As most land in the County is unsuitable for horticultural production or other forms of intensive rural land use, the best use of the land involves maximising pastoral production. Further subdivision of farms into small lots can only result in a fragmentation of larger farms presently operated on a full-time basis by farmers with the resources and expertise to operate profitably. If more farms are subdivided into small farms the result can only be a loss in efficiency because, as this study shows, small farms are inefficient because of the much larger capital requirement per stock unit and the consequent decline in margins of profitability. For this reason and because of the present supply of already subdivided allotments, we do not consider provision for further subdivision of this type as either necessary or justifiable at the present. However, consideration could be given to a subdivision ordinance that permitted the subdivision of areas for a range of high value crops that could ultimately be developed as full-time units in accordance with the known capabilities of the land, even though the unit is intended in the first instance to be used on a part-time basis."

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## PART-TIME FARMING IN UPPER HUTT

*Author:*

John McKeown.

*Date Published:*

Unpublished study, July 1977. Upper Hutt City Council.

*Objectives:*

The study set out to report on the extent of rural holdings not being full-time farming units within the City of Upper Hutt, and to document the uses to which these holdings were put, with particular regard to their utilization for part-time farming purposes.

*Area Surveyed:*

Upper Hutt area, including Akatarawa, Mangaroa, Whitemans and Pakuratahi Valleys and the Moonshine Area.

*What/Who Surveyed:*

Investigation of 149 rural holdings in Upper Hutt, not being farmed full-time, ranging in size from two hectares to 846 hectares (no arbitrary upper size limit has been imposed) with 53.6 percent of these being less than 10 hectares in size. Two hectares was adopted as a minimum qualifying size.

The study was one of a series of ongoing investigations into land uses in the rural areas of Upper Hutt City and was intended to complement the Akatarawa and Mangaroa/Whitemans Valleys Land Use Planning Studies.

*Type of Survey:*

Not specified whether postal or personal.  
Response rate 66 percent, although it was possible to retrieve certain pieces of land use information on non-respondent holdings from the Akatarawa and Mangaroa/Whitemans Valley Studies.

*Who Did the Survey:*

John McKeown, Town Planning Assistant, Upper Hutt City Council,  
Town Planning Office.

*Summary:*

1. The majority of the identified rural holdings were in the Akatarawa and Mangaroa/Whitemans Valley, each having around 40 percent of the total. The total area of rural holdings surveyed was approximately 8,500 hectares. The amount of prime farmland contained within this area was less than 200 hectares and involved some 25 holdings.

The Karapoti area was for the most part being effectively utilized for part-time farming, but it was found that only half of the Plimmer Flats were being farmed, and less effectively than in the Karapoti. The majority of holdings on good land in Mangaroa and Whitemans Valley appeared to be utilized fairly effectively in a part-time farming sense.

2. Around one half of the holdings suitable for some degree of live-stock farming were being utilized fairly effectively (i.e. carrying in the region of 11 to 12 stock units per hectare (productive area)). One quarter of the agriculturally utilized holdings were not being utilized to this standard and for the remainder there was insufficient information to enable an evaluation to be made.
3. The vast majority of rural holdings not being used for agriculture consisted of very poor quality land, exposed areas of scrub and bush clad hillsides, often in large blocks. The agricultural potential of these areas is very limited by any farming standards, and it was considered that if utilized at all (a third of respondents not currently farming their properties indicated their intentions to do so in the near future) they cannot help but result in some form of productive output, if only for home consumption, where formerly production was nil.
4. About half of respondents not presently living on their holdings indicated a desire to utilize them for their future homes. Holdings appeared to be more likely to be utilized effectively for agricultural purposes where the owner actually resided on the property.
5. On the whole, there was a fairly high level of labour input, on the part of owners who farmed their holdings, with 46 percent devoting in excess of 17 hours per week. Capital inputs varied greatly from holding to holding.
6. Recreation as a sole use of rural holdings was relatively insignificant. However, four out of every ten respondents reported recreational usage on their properties in association with agricultural and/or residential use.

7. The desire to reside in a rural environment overall constituted the single most important motivation for the purchase of the rural holding, followed by the intention to use the property for agricultural purposes.
8. A substantial number of owners (26% of the responses) had undertaken some degree of afforestation on their holdings. The size of planting ranged from 15 to over 600 hectares. Afforestation was generally combined with stock grazing.

*Conclusion:*

The study showed that in the area surveyed, little prime agricultural land was lost to rural residential properties. Many of the properties surveyed were not suitable for farming. Those properties with land suitable for farming, around half, were utilised effectively. Afforestation appeared a good use of some of this country and several owners had afforestation schemes.

The majority of holdings being farmed were returning very low incomes and many would have been operating at a loss in view of rates, maintenance, etc. However, as these holdings were predominantly rural residential, much of this expenditure would be incurred in any case. It should be borne in mind that economic returns are not the over-riding concern of the rural residential farmer, as of necessity is the case with the full-time farmer, and also the serious part-time farmer, though to a lesser degree. With this group of landowners, farming, however limited in extent, is a source of contentment, a welcome change to the urban existence, and an essential adjunct to the rural residential lifestyle. Pleasure, not profit, seemed to be the keynote.

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## HOMESTEADER SURVEY

*Author:*

Ray Caird.

*Date Published:*

Unpublished survey, July 1979.

*Objectives:*

To identify some of the more important variables affecting the success of the homesteading or communal lifestyles.

*Area Surveyed:*

Nelson, Waimea and Golden Bay areas of Nelson province.

*What/Who Surveyed:*

160 homesteaders and comuners in the above areas of the Nelson province. A homesteader was broadly defined as one whose decision to live on the land was a lifestyle choice rather than a commercial one, and whose aim is some degree of self-sufficiency. Almost half the respondents had land of 10 hectares in size or less.

*Type of Survey:*

Postal.

81 completed questionnaires returned (50 percent response rate) from 43 males and 38 females.

*Who Did the Survey:*

Ray Caird, "The Bracken", Marahau Valley Road, R.D. 2, Motueka.

*Summary:*

1. The average homesteader family consisted of two young children. Both parents had usually made the decision to move from a city to a rural way of life before 35 years of age. Educational qualifications were found to be high. Over half were professionally trained people. About 40 percent possessed a university degree and almost 20 percent had teaching qualifications.

2. The most significant reason for moving onto the land was the desire for a more healthy way of life, a desire for more independence and for personal growth.
3. A wide range of activities was evident on the homesteads, brought about by the desire for self-sufficiency. All of the owners surveyed had a vegetable garden, almost all kept hens, and a majority had planted trees, and kept bees and sheep.
4. The physical and, to some extent, the psychological pressures experienced by the homesteaders were often greater than had been anticipated. Family cooperation and happiness were seen to be critical in handling the often conflicting range of priorities and pressures.
5. Income difficulty presented the biggest single problem to the homesteaders. The monetary costs of lifestyle, and initial building and land development, are often unavoidably high. Most homesteaders rely on an outside income, and many referred to the difficulty of earning an outside income, while finding sufficient time to develop the land. Other areas of frustration were: lack of knowledge and experience in horticulture and livestock husbandry; lack of adequate machines, and insufficient mechanical aptitude; county building and allied restrictions.
6. The homesteading pressures concerning money, work, and ideals, created greater stress for women than for men. However, in spite of the difficult nature of the life, both sexes were generally satisfied with the improved quality of life since moving to the country. Eighty percent of the homesteaders stated that their quality of life had improved, and not one said that it had deteriorated.
7. A dissatisfaction with New Zealand society today was expressed by 90 percent of the homesteaders surveyed.

*Conclusion:*

The survey showed a clear picture of the typical homesteaders in this particular area, who lived on 10 hectares or less of lower grade land. These people were dissatisfied with "New Zealand society today", and had gone "back to the land". As a group they were highly satisfied with their present way of living, but the homesteading pressures concerning money, work and ideals created great pressures. Easily the most significant homestead based money earners were crafts, such as pottery, spinning and weaving, and woodwork.

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PART-TIME FARMING IN THE CHRISTCHURCH  
RURAL-URBAN FRINGE

*Author:*

A. Mears

*Date Published:*

1974. University of Canterbury.

The results of this study are also discussed in a Paper dealing with the wider aspect of dealing with Peri-Urban Agriculture:

"A Case Study in Peri-Urban Agriculture in New Zealand. Paparua County, Canterbury". A Report to the OECD, Ministry of Agriculture and Fisheries, Economics Division Research Paper 3/77, March 1977.

*Objectives:*

1. To examine the development and structure of part-time farming in a selected area, within the Christchurch rural-urban fringe, namely Paparua County.
2. To assess the impact of part-time farming on agricultural land-use patterns in the fringe zone, and to discover to what extent part-time farming could be considered a component of the urban shadow phenomenon.

*Area Surveyed:*

Paparua County.

*What/Who Surveyed:*

A random sample of part-time farmers in Paparua County. The sample was drawn from the Valuation Department's records and part-time farming was defined as ownership of a rural holding for use other than to provide a property owner with his principle source of income. The total population of part-time farms in Paparua County as of 1 January 1974 was 827.

*Type of Survey:*

Postal questionnaire of 95 randomly selected part-time properties.

*Who Did the Survey:*

A. Mears. Thesis in partial fulfilment of a Degree of Master of Arts in Geography at Canterbury University.

*Summary:*

1. The vast majority of part-time farms were small, and 80 percent were less than 8 hectares.
2. Part-time farmers were found to be mainly middle-aged and elderly, and economically independent of farm derived income. The most important reason for the development of part-time farming was identified as a desire for rural living in response to the increasing pressures of urban life. A secondary reason was the investment potential of these units.
3. Fifty percent of the properties surveyed were used for agriculture by the owner while a further 21 percent were farmed by someone other than the owner, under a leasehold agreement.
4. Part-time farmers tended to adopt low-intensity types of land-use. The land-use choice was conditional on several factors, of which profitability was given as the most common reason. However, constraints such as capital and labour availability, pre-existing land-use and physical conditions also influenced the range of land-use choice. The holdings were characterised by low levels of labour and capital inputs, and low levels of productive output, although several units were intensively farmed both in terms of inputs and productive output.
5. Of the properties which were not farmed by the owner at the time of the survey, thirty percent of the owners intended to farm their properties in the future. The remaining part-time holdings fulfilled solely residential, recreational and investment functions.

*Conclusion:*

It appeared from the survey that a high proportion of the smallholdings in the rural-urban fringe were used for farming, and that amongst many property owners there was a desire to intensify farm production and thereby increase farm income.

It therefore seemed likely that the development of part-time farming does not result in a significant loss of production, and that on land of low productive potential, production may even increase in the long term.

The author further concludes that given the social benefits that accrue to those residing on part-time farms in the rural-urban fringe, and having regard to the limited loss of production associated with the development of part-time farming, it might be argued that greater

flexibility be allowed in the operation of planning regulations controlling rural subdivision. While the subdivision of rural land of very high agricultural potential might be refused unless the applicant can demonstrate that the allotment created would be used as an economically viable unit, areas of lower productive potential should be designated, within which, subdivision with a minimum site area requirement of 2 hectares would be permitted for use as part-time farms. These areas of part-time farming should, however, be located at a sufficient distance from the city to prevent the development of a form of low density urban sprawl.

Lastly, the author felt that any loss of production which might occur following subdivision could be negated by the establishment, perhaps under the initiative of the Department of Agriculture and Fisheries, of part-time farming cooperatives to pool farm machinery management skills, labour, marketing information and off-farm labour services.

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THE EFFECT ON PRODUCTIVITY OF THE SUBDIVISION  
OF AN AREA OF CLASS I AGRICULTURAL LAND

*Author:*

F.H.T. Perkins

*Date Published:*

Unpublished dissertation, 1976. Lincoln College.

*Objectives:*

To investigate whether or not a permanent drop in primary production actually occurred when an existing farm of 275.2 hectares was subdivided into 44 separate blocks.

*Area Surveyed:*

Paparua County

*What/Who Surveyed:*

Forty-four separate blocks, covering 275.2 hectares, which was previously a single farm. The farmlets ranged in size from 4.05 to 17.8 hectares, the average area being 6.25 hectares.

The owners of the 275.2 hectare farm prior to its subdivision in 1972 were interviewed, to gain a comparison. An estimate of what the average efficient farmer for the area would produce on the unit in 1976-77 was made.

*Type of Survey:*

Postal and personal - 75 percent did not return the questionnaire, and were interviewed either personally or by telephone.

*Who Did the Survey:*

F.H.T. Perkins. In partial fulfilment of the requirements for the Diploma of Agricultural Science, University of Canterbury.

*Summary:*

1. An area of 21.2 hectares was being used for settlement purposes. Although this area was no longer contributing to primary production, it was felt worth considering that many of the houses produced vegetables on part of the area, that the trees planted for shelter contributed to the aesthetic and hence the amenity value of the locality, and that had the blockholder not chosen to live in this environment he would have used 0.1 of a hectare in town for residential purposes, so adding to existing pressure on the urban fringe.
2. Land under irrigation had risen from zero to 37.4 hectares, and 11 haybarns had been erected, since subdivision. Although such improvements may be considered over capitalization on a large farm, they contributed to the area's productivity, by providing a buffer supply of winter feed that other farmers could draw on if necessary.
3. In the two years prior to this survey, two of the blocks had begun to be used for more intensive production (one running 36 sows, and the other producing pine tree seedlings). Two other blockholders mentioned plans to adopt more intensive land use systems at a later date.
4. A gradual decline in the quantity of grazed-out stock was accompanied by an increase in the number of stock carried permanently.

*Conclusion:*

Comparative data for the farm before and after subdivision, show that a sharp fall in production did occur after subdivision. However, production has not remained permanently depressed. It is not clear at what level it can be expected to stabilize. Further investigation over a large area with subdivision of longer standing would be required before definite conclusions could be drawn. This study suggests that such an investigation would be fully justified.

- N.B. This suggestion was taken up and the results of the further investigation are found in the "Smallholdings in Papparua County" survey.
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## SMALLHOLDINGS IN PAPARUA COUNTY

- Volume 1: Summary and Conclusions  
Volume 2: The Bells Road/Halkett Road Survey  
Volume 3: The Random Sample Survey.

*Authors:*

K.G. Lawn, H.G. Burrige, Mrs A.S. Berzins, R.D. Keating.

*Date Published:*

1979, Paparua County Council.

*Objectives:*

- Volume 2:
1. To consider the social characteristics of the owners of small blocks and the reasons why they settled on a small block in the rural area.
  2. To determine the longer term production trends when a whole farm is subdivided into a number of lots and subsequently settled and developed.
  3. To identify changes in the nature of management and the utilization of land, labour and capital.
- Volume 3:
1. To conduct a survey of a random sample of holdings less than 40 hectares, which would broadly represent the characteristics of small blocks in the Paparua County.
  2. To examine the demographic, social characteristics and some of the motivations of small blockholders.
  3. To analyse the land use patterns and productive efficiencies of small blocks.
  4. To consider the utilization of the factors of production (land, labour and capital).
  5. To examine the different social characteristics between part-time, full-time and retired blockholders and compare the production from their blocks.
  6. To conduct a random survey of blockholders that covers a wide range of physical environments in the County, so as to provide a contrast against which the results of the Bell Road Survey can be compared.

7. To provide a basis for further studies so that production trends can be monitored on the same sample in the future.

*Area Surveyed:*

- Volume 2: Bells Road/Halkett Road, West Melton in the north west of Paparua County.
- Volume 3: Random sample of smallholdings spread throughout Paparua County.

*What/Who Surveyed:*

- Volume 2: Relates to a 275 hectare property which was subdivided in 1972 into 44 blocks. The blocks in this survey ranged in size from 4-18 hectares with an average size of 6.25 hectares.
- Volume 3: The County was divided into 15 areas. Approximately 7 percent of the holdings within each area was selected by random sample tables. The final sample produced contained 128 holdings. All surveyed holdings were less than 40 hectares (100 acres) in size.

*Type of Survey:*

- Volume 2: Personal. Production figures obtained from all 44 blocks. Information on questions other than production obtained from only 37 of the blockholders (84 percent).
- Volume 3: Almost all questionnaires were completed as personal interviews. 117 of the 128 blockowners contacted responded (91.4 percent).

*Who Did the Survey:*

The Paparua County Council's Town Planning Division. This was in response to a survey carried out by Mr F.H.T. Perkins entitled "The Effect on Productivity of the Subdivision of an Area of Class I Agricultural Land".

*Summary:*

## Volume 2: The Bells Road/Halkett Road Survey:

Demographic and Social Characteristics

1. The blockholders in this survey appeared to have a distinctive demographic profile when compared to the New Zealand population census. There were fewer young couples and infants and fewer adults over 60 years old. Conversely there was an over-representation of adults 30-49 years and children 4-14. The average family consisted of 3-6 persons.
2. The majority of blockholders belonged to the professional and skilled occupational categories with very few rural based occupations.
3. The majority of blockholders previously resided in the metropolitan area of Christchurch and a significant number originated from the more affluent suburbs of that city.
4. Social motives (such as the appeal of the rural environment and associated lifestyle) outweighed agricultural interests for moving to the rural area. The convenience of the location (more than its agricultural potential) and the general appeal of the area were important considerations in choosing a location. While the agricultural value of the land ranked relatively low in the reasons for purchasing land, once established the production from the land appears to have increased in importance.
5. The average size block was approximately 6 hectares. The block holders indicated a preference for larger blocks in order to increase production. Price and availability appeared to have been the limiting factors in the choice of block size.
6. Farming experience was not generally extensive. However, the majority of blockholders made use of farm advisory services and a number of blockholders belonged to various farm organizations.

Production

1. The area under pasture land reduced by 36 percent to be replaced by an increase in lucerne production. An important trend towards diversification and intensification was noted - particularly nursery tree seedlings, factory farmed pigs and horticultural crops. The area taken out of production for residential and shelter purposes increased considerably. There was a reduction of stock carried after subdivision with a reduction in numbers of cattle and ewes outweighing the increase in numbers of dry sheep and horses.
2. Total production (as measured in ewe equivalent units) has not been adversely affected by subdivision. Further, at the time of the survey, there were high levels of output from both nursery tree production and pigs. If these types of production were added to the 1978/79 total, it is estimated that production from the sub-



divided blocks would actually be higher than the original farm total in 1971/72. Production per hectare for the entire survey area was 9.4 in 1978-79. The measurable total of production in 1978-79 was only 142 units below that of the original farm, and when the land involved in production that could not be converted to ewe equivalent units, the land showing nil production and the land taken up by dwellings and shelter was taken off the total area, it appeared that production per effective hectare on the subdivided blocks was higher than on the original farm prior to subdivision.

3. It was found that 57 percent of the blocks at the time of the survey were being managed at average or above average efficiency ratings.

#### Factors of Production

1. Only one of the 44 blockholders was a full-time farmer. The rest were part-time farmers, six of whom were retired.
2. Changes in land utilization were attributed to various adaptations to suit the distinctive nature of small block farming and the diverse nature of the new management. A considerable number of blockholders anticipated land use changes and a large portion of these planned to diversify into horticultural production. This trend towards horticulture began after subdivision and it would appear that small block farming and the Bells Road/Halkett Road area may be particularly suited to smaller scale horticultural production.
3. As the blockholders become more established, and if the plans to intensify and diversify are implemented, total production over the blocks should increase.
4. Labour input on the blocks increased considerably after subdivision. However, this was in many cases inexperienced and was put towards diverse goals. The volume of capital inputs also increased, and such factors as the increase in the use of irrigation and application of fertilizer, together with shelter belts, will do much to achieve the potential productivity of the soil. The blockholders made extensive use of outside contractors to perform the more specialized farming operations.

#### Volume 3: The Random Sample Survey

The analysis of the survey was broken down into the following groups:

	<i>Numbers</i>	<i>Percentages</i>
Part-time	72	62%
Full-time	24	20%
Retired	<u>21</u>	<u>18%</u>
	<u>117</u>	<u>100%</u>

It was found that there were distinct variations between these categories and these are highlighted in the summary discussion below:

#### Demographic and Social Characteristics

1. The sample population showed an over-representation (c.f. the New Zealand population) of middle-aged couples 40-59 and children between 10-19. Conversely there was an under-representation of young couples and young children as well as adults over 70 years old.
2. The majority of blockholders were employed in full-time occupations away from the holdings and derived a relatively small percentage of family income from farming their holdings. However, most full-time farmers derived the majority of their income from their blocks.
3. The dominant motive behind moving to the rural area had been the appeal of the rural environment and associated lifestyle. A high proportion of the full-time farmers were either rural born or had always lived in a rural environment. The dominant motive behind choosing a particular locality, had been its convenient location in relation to the city (part-timers) and suitability of soil and area (full-timers). A significant proportion of the retired blockholders ran racehorses on their properties.
4. The average size of the full-time holdings was 14.7 ha, of part-time and retired blocks 5.9 and 8.2 ha respectively. Dissatisfaction with the size of blocks was noted among all the blockholders. When asked, 45 percent would have preferred larger properties in order to expand farming activities and 32 percent would have preferred smaller properties.
5. The full-time farmers had relatively more farming experience than part-time and retired blockholders and their membership of farm organisations was higher.
6. The retired blockholders had owned their properties for an average of 17.8 years, whereas the average length of ownership for full-time farmers was 14.9 years and 7.3 years for part-time blockholders.

#### Production

1. Just under half of the blocks had adopted pastoral stocking as the main land use. A number of blocks were classified as diversified and several of these combined horticultural activities with other types of land use.
2. The intensity of production in terms of both input and output varied considerably. Full-time farmers more frequently undertook intensive farming operations than part-time or retired blockholders.
3. The majority of blocks were producing at an average or above average efficiency per hectare for their particular soil type. Only 24 percent of blocks were producing below the average for their

particular soil type. Full-time farmers were more efficient producers than the part-time and retired blockholders.

#### Factors of Production

1. Thirty-two percent of blockholders anticipated making land use changes and the majority of these planned to intensify and diversify production, particularly in the direction of horticultural activities. Retired and full-time farmers were more settled in their land use patterns than part-time farmers.
2. Labour input varied considerably over the blocks. However, it was generally low with the exception of the full-time farmers and a small number of retired blockholders.
3. Seventy-nine percent of the blocks had dwelling and associated improvements on them. Most had fencing and shelter trees and there were a considerable number of sheds and outbuildings of various kinds. Blocks that were worked full-time had higher volumes of capital inputs than the part-time blocks. The majority of blockholders obtained their water for both household and stock purposes from deep wells and 32 percent had facilities for irrigation. Retired blockholders made little use of irrigation.
4. Sixty percent of blockholders made use of outside contractors to perform the more specialized farming operations with the full-time operators utilizing contractors the most frequently and retired blockholders the least.

#### *Conclusion:*

The availability of small blocks in the rural area surrounding a major urban area is obviously desirable from the point of view of providing an alternative environment for a diverse range of people.

Agricultural production was not always high on the list of priorities when considering purchasing a smallholding, or choosing which site to purchase. However, once established, it appears that interest in agricultural production increases, and indeed many would now prefer larger properties for that purpose. There appears to be a need to provide a wide range of sizes of blocks to meet the wide range of needs.

The provision of dwellings on smallholdings is obviously desirable from the point of view of satisfying a demand for alternative living environments. The results of these surveys also indicate that this can be provided without necessarily having a detrimental effect on agricultural production.

After an initial decline in production immediately after subdivision, production increased steadily and there were indications that this upward trend would continue. At the time of the surveys, production was at least equal to and probably higher than total production before

subdivision. Both surveys showed significant trends toward intensification and diversification of production.

These results do confirm a number of other studies which point to the conclusion that smallholdings (whether full-time or part-time) do not necessarily result in a misuse or reduced use of the rural land resource. Indeed they can lead to innovative changes.

The results of these surveys indicate the need to reconsider the present "full-time economic unit" criteria used by the Papanua County Council for dwellings in the rural areas, and the 40 ha minimum subdivision. It does not necessarily mean that all planning controls should be removed, but that the District Scheme should be more responsive to the need to provide for smallholdings and encourage their establishment in appropriate locations as a means of encouraging a strong rural economy.

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\* Out of print. Photocopies are available at a cost of \$5.00.

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