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Changes in Rural Land Use and Part-time Farming, Central Victoria, 1974 to 1978

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Successive surveys of 376 rural holdings near Melbourne, in 1974–75 and 1978–79, revealed a substantial increase in part-time farming at the expense of full-time farming, but little change in overall land use and area farmed. Few of the part-time farms surveyed were profitable in the mid-1970's, but most farmers put their farming way of life ahead of financial considerations, and the blow was softened by capital gains on farm land and the tax deductibility of farm losses. Part-time farms were a little less productive than neighbouring full-time farms, but there was little evidence that small part-time farms were neglected or badly managed. In any case, the relative insignificance of small holdings in the survey areas suggests that concern about the adverse land-use consequences of "hobby farms" and "rural retreats" may be overstated.

Introduction

The major interest in urban fringe agriculture in Australia arises because it is a (and sometimes the) major user of the scarce land within commuting distance of urban jobs. As such, the agricultural land is frequently perceived as a current or potential future source of cheap/accessible food supplies, recreational space, solitude, scenery, native flora and fauna, pollutant absorption and other rural resource services desired by the urban population. Recognising the public-good nature of many of the non-marketed services provided by agricultural land, and the reluctance of profit-oriented private landowners to deliberately keep such options open for the future if they perceive profitable development opportunities, Australian planning authorities have intervened in urban fringe land markets, mainly via the imposition of subdivision controls (e.g., N.S.W. Planning and Environment Commission 1977). Intervention has also been encouraged by reports of an increased incidence of land-based spillovers, such as weeds, fire hazards, and uncontrolled domestic pets, occurring as a consequence of the subdivision of agricultural land for "hobby farms" and "rural retreats" (e.g., Aberdeen, Hogg and Associates 1977; Lewis 1976; Wagner 1975), despite counter-assertions that the market allocation of land is generally satisfactory (Campbell 1977).

Despite increasing government intervention in urban fringe land markets, there is relatively little empirical information available to assess market allocation of urban fringe agricultural land in Australia. Research on urban

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fringe agriculture has been sporadic, and has generally originated from planning bodies, rather than agriculturalists (e.g., Aberdeen, Hogg and Associates 1977; Catt 1978; John Paterson Urban Systems 1978; Plant Location International 1974; Wagner 1975). This is a reflection of the fact that rural land within commuting distance of urban jobs is a scarce resource in terms of its ability to satisfy urban-based demands for residential and recreational space, scenery, etc., but can readily be replaced by other rural land, additional fertilizers, etc., in the production of farm products.

Almost all previous surveys of urban fringe agriculture in Australia have been restricted to one point in time (for a partial exception, see McQuin 1979). Such studies may be of limited value in formulating rural land-use plans and planning controls, although a number have been used for that purpose (e.g., John Paterson Urban Systems 1978). The difficulty is that "snap-shot" surveys reveal relatively little of the dynamics of land use and agriculture on the urban fringe, although both agriculture and land development are industries characterised by high variability of output and/or returns. Given that planning controls in Australia are generally only able to influence *changes* in land use, as opposed to established land uses, this lack of a dynamic perspective of urban fringe agriculture may result in controls which are inappropriate on economic or social grounds.

This paper reports and discusses information obtained from successive surveys of a large group of rural landholdings near Melbourne. It concentrates on:

(i) changes in landownership and use over time; and

(ii) the motivations and behaviour of urban fringe farmers, particularly part-time farmers, who are very important in determining the use of much urban fringe land.

The first of the surveys, carried out in the summer of 1974–75, was designed to collect basic information about the incidence and nature of, and motivation for, part-time farming in the rural areas close to Melbourne, where a majority of part-time farmers have a main job outside agriculture. The results of the 1974–75 survey have been published previously (Wills 1978). The second survey of the same landholdings, carried out in 1978–79, was designed to monitor changes in ownership, land use and farming activities between 1974 and 1978, and to test the following hypotheses about urban fringe part-time farming arising from the 1974–75 survey:

(1) that part-time farming is increasing in importance in the study areas, both in terms of numbers of farms and farm area;

(2) that once commenced, it is a long term (i.e., lasting 8–10 years or more), rather than a temporary, status for most farmers;

(3) that many part-time farms were unprofitable in the late 1970's;

(4) that the majority of part-time farmers farm because of a personal preference for farming, rather than for financial reasons;

(5) that part-time farms are not significantly less productive on a per-hectare or per-man basis than comparable full-time farms in the study areas; and

(6) that many part-time farmers achieve substantial income tax savings as a result of their farming activities.

The results reported herein relate to these hypotheses.

The Surveys

The selection of the shires of Kilmore and Lillydale for the study, and the selection of sample holdings within those shires, are fully described in the reports of the 1974–75 survey (Wills 1977, 1978). Briefly, the two shires represent different types of urban fringe agriculture: Kilmore, north of Melbourne, is dominated by sheep and beef cattle grazing; while in the North and West Ridings of Lillydale, east of Melbourne and including part of the fertile Yarra Valley, the major agricultural enterprises are dairying, beef cattle and orcharding. Areas devoted to urban uses were excluded. The 1974 rating rolls were used to identify two populations of rural holdings in each shire: 4 to 50 and over 50 hectares in Kilmore, and 2 to 25 and over 25 hectares in Lillydale.[1] A random sample of 90–100 rated holdings was selected from each of these four populations, giving a total of 376 sample holdings in 1974–75. With lesser numbers of large than of small holdings in each shire, this procedure resulted in a higher sampling fraction for large holdings in each case. The area of land sampled was 19 720 ha in Kilmore and 9 422 ha in Lillydale, or approximately 45 per cent and 60 per cent of the total area covered by all eligible holdings in the respective survey areas.[2]

Subdivisions and amalgamations of rated holdings between 1974 and 1978 meant that many of the rated holdings chosen in 1974 no longer existed as such in 1978; however, using title details in the rating rolls, it was possible to determine the 1978 owners of practically all of the parcels of land chosen in 1974.

The survey procedure in both 1974–75 and 1978–79 involved a brief telephone interview or mail questionnaire, directed to all sample landowners, designed to determine the use of the land, the identity of the land operator, and his/her employment status. This enabled the identification of full-time and part-time farmers, the latter being defined as farm operators who have another income-yielding occupation, or who have retired from another occupation without agriculture becoming their main source of income. In 1974–75, 82 part-time farmers thus identified, and willing, were then interviewed in person about their work and family background, farm and off-farm activities, reasons for farming, farm finances, and future plans. In 1978–79, 30 of those previously interviewed were re-interviewed on these topics, together with 30 other part-time farmers, and 15 full-time farmers. The 1978–79 interviews were restricted to farmers grazing beef cattle/sheep/horses, since almost all part-time farmers chose one or more of those enterprises.

Limitations of the Sampling Procedure

The problems of selecting a representative sample of part-time farms starting from shire rating rolls were discussed at length in the report of the 1974–75 survey (Wills 1978). In the 1978–79 study, with emphasis on changes in the ownership and use of *all* sample land parcels between 1974 and 1978, inability to trace the owners of many holdings using the information in the rating rolls was particularly frustrating. In part, this was due to the time lags and filing problems involved in updating rating rolls after properties were subdivided and/or sold. Appendix Table 1 shows that this problem was more acute in Kilmore, where the shire rate books were updated by hand entries until 1977.

[1] Referred to below as "small" and "large" holdings/farms, respectively, for each shire.

[2] A smaller proportion of the population was sampled in Kilmore than in Lillydale—see Appendix Table 1.

A second, less serious, problem with the use of rating rolls is that the population of *operational* holdings is not identical with the sampled population, *rated* holdings, many farms being split into two or more units for rating purposes (see Appendix Table 1). This led to some sample wastage when farm operators were identified for possible interviews; it also led to errors in the stratified sampling technique adopted, in that some operational holdings sampled as "small" turned out to be "large".

Survey Results[3, 4]

Land Sales and Divisions

Omitting land passing between family members with the same surname, which could not be reliably identified in the rating rolls, Table 1 shows a significant turnover in land ownership between 1974 and 1978. The numbers of rated holdings in the sampled areas increased to 404 between 1974 and 1978, due to property divisions, mainly of large holdings of above-average size. As a result, not all of the holdings enumerated in the "large" columns of Table 1 were large holdings in 1978.

Table 1: *Sales and Divisions*[a] *of Rated Holdings* 1974–78

	Kilmore		Lillydale	
	Small	Large	Small	Large
Number of holdings in 1974 samples, of which:	101	98	90	87
Number divided and portion or all sold at least once (percent of total survey area involved).	3 (3)	11 (15)	3 (6)	6 (10)
Number where undivided holding sold at least once.	25	12	19	7
Number of additional lots created (not including residential lots <2 ha).	1	13	2	12
Corresponding number of holdings in 1978 survey.	102	111	92	99

[a] The property divisions identified from the rating rolls involve the alienation of part of the holding, as opposed to the pre-existence or creation of multiple titles for one rated holding, where the identity of the ratepayer does not change.

[3] In addition to the results reported here, the 1978–79 survey covered characteristics of the farms and farmers interviewed. These were little different to those described in the reports of the earlier survey (Wills 1977, 1978), partly because many of the same farmers were interviewed. Part-time farms varied widely in area, and almost all concentrated on grazing (mainly beef cattle). Both part-time and full-time farmers varied widely in age, family size and educational attainments. As before, part-time farmers held a wide variety of off-farm jobs, with high-income jobs disproportionately represented, and a majority of the part-time farmers, and many of their spouses, had had farm experience prior to operating their own farm. These and other results are reported in Wills (1982).

[4] Some of the results are presented in tables with separate figures for small and large holdings; in interpreting such results, the reader needs to bear in mind that the fraction of the population sampled was approximately 1.4 times greater for large than for small holdings in Kilmore, and 1.7 times greater in Lillydale.

Changes in Operation and Use of Land

Table 2: Operational Status of Rated Holdings Sampled in 1974*:* 1974 *and* 1978

Operator of holding	Kilmore				Lillydale			
	Small		Large		Small		Large	
	1974	1978	1974	1978	1974	1978	1974	1978
Full-time farmer: Resident ..	7	8	37	32	15	13	51	48
Absent ..	1	..	2	..	1	..	3	3
Part-time farmer: Resident ..	21	26	11	20	28	31	16	19
Absent ..	23	15	17	20	8	10	8	16
Farmed—Co. or Institution ..	..	..	3	3	..	..	1	1
Farmed—no details	..	..	2	2	1	..	..	..
Non-farmer: Resident.. ..	3	9	..	2	6	14	1	3
Absent	7	9	1	7	7	6	..	3
Co./Instn. ..	4	6	..	1	1	1	2	1
No information	35	29	25	24	23	17	5	5
Totals	101	102	98	111	90	92	87	99

Table 3: Percentages[a, b] *of Area Sampled*[c] *in* 1974 *by Type of Operator:* 1974 *and* 1978

Operator of holding	Kilmore		Lillydale	
	1974	1978	1974	1978
Full-time farmer: Resident	37.1	32.5	64.4	54.6
Absent	1.4	..	2.7	1.3
Part-time farmer: Resident	10.1	17.2	14.2	18.5
Absent	15.1	13.8	6.0	12.9
Farmed: Company or Institution	8.7	8.4	0.8	0.8
Farmed: No details	1.7	0.9	0.1	..
Non-farmer: Resident	0.2	0.8	0.9	2.3
Absent	1.8	3.9	0.5	0.9
Company/Institution	0.6	0.7	2.8	0.7
Subdivision into less than 2 ha lots	..	1.7	..	0.5
Status unknown: Resident	2.4	0.9	0.3	0.3
Absent	2.3	2.2	1.2	0.1
Company/Institution	7.5	4.1	0.1	..
No information	11.2	13.0	6.1	7.0

[a] Since the sampling fractions are less for small than for large holdings, the percentages in the table are obtained by multiplying the small holding areas in Kilmore and Lillydale by 1.40 and 1.69 respectively.

[b] Percentages in the table may not sum to 100 per cent due to rounding.

[c] The total area of properties sampled was 19 720 ha in Kilmore and 9 422 ha in Lillydale, or about 45 per cent and 60 per cent of the total area covered by all eligible holdings in the respective survey areas.

Tables 2 to 5 show changes in the operational status and use of land on the sample holdings between 1974 and 1978, measured in terms of both numbers of holdings and percentages of the total area sampled in various

categories. Tables 2 and 3 show a decrease in numbers of and land used by full-time farmers, and a corresponding increase in the importance of part-time farmers and non-farmers. Despite the increase in non-farmers, the percentage of each of the sampled areas included in farm holdings fell only slightly, from 74.1 per cent to 72.8 per cent in Kilmore, and from 88.2 per cent to 88.1 per cent in Lillydale. Full-time farmers (together with farming companies) were still the major land users in the survey areas in 1978. Full-time farming was relatively more important in Lillydale, on the very edge of the Melbourne built-up area, than in Kilmore, 10–20 km further out. Probable explanations include high agricultural returns in the Lillydale area, due to its suitability for labour-intensive farm enterprises, such as dairying, fruit and vegetables, which are too managerially-demanding for most part-time farmers, and good access between Melbourne and Kilmore along the Hume Freeway.

Tables 4 and 5, which record changes in the main land-use reported by the owners of sample holdings, show few clear-cut changes. One exception is the increase in numbers of owners reporting non-use (including subdivision) of their holdings, however the percentage of rural land unused in both shires remained small in 1978; about 7 per cent in Kilmore and 4.5 per cent in Lillydale. The change in the area of unused land between 1974 and 1978 was very different in the two shires; a 250 per cent increase in Kilmore, where low returns from beef production and the division of holdings were responsible for most withdrawals of land from farming, but only a 10 per cent increase in Lillydale.[5] In Kilmore, 346 hectares of rural land in the sampled areas were converted to residential-sized lots of less than two hectares, compared with only 51 hectares in Lillydale. However, since the study did not include an investigation of small-lot subdivisions in the areas sampled, it is not known whether this land was effectively lost to agriculture.

Amongst the farming enterprises, horses increased in importance (from a very small base) in both shires, and dairying decreased in Lillydale, no doubt partly in response to the phasing out of wholemilk contracts by the State government. No obvious trend emerged for other farm enterprises. A substantial number of (mainly small) part-time farmers shifted from beef cattle to horses while beef prices were depressed between 1974 and 1978. However, the total area of holdings carrying beef cattle (frequently in combination with other farm enterprises) rose in Kilmore, and only fell marginally in Lillydale, due to the continuation of beef cattle production on large holdings, which account for almost 90 per cent of the sample area in each shire.

The preceding point highlights the fact that, in terms of their direct effects[6] on rural land in the two shires, changes in the operation of small holdings necessarily have a minor impact, simply because of the relatively small area included in small rural holdings. After adjusting for the different sampling frequencies for small and large holdings, and adding in additional small holdings created by subdivision between 1974 and 1978, the percentage of the survey areas in Kilmore and Lillydale accounted for by small holdings in 1974 and 1978 was approximately 11 per cent and 12 per cent respectively for Kilmore, and 10 per cent and 11 per cent for Lillydale.

[5] Note that these changes could possibly be outweighed by changes in the areas of unused land on farms, or in the intensity of use of land on farms, not picked up in Table 5.

[6] Changes on small holdings may have substantial indirect effects on land use on large holdings, either via physical spillovers (e.g., changed bushfire risks, domestic dog problems) or pecuniary spillovers (e.g., changes in land values and rates, new employment opportunities for commercial farmers.)

Table 4: Main Land Use on Rated Holdings Sampled in 1974*: 1974 and* 1978

Main Land use	Kilmore				Lillydale			
	Small		Large		Small		Large	
	1974	1978	1974	1978	1974	1978	1974	1978
Beef cattle	30	21	22	22	25	15	41	46
Dairy cattle	2	3	3	2	1	2	11	10
Horses	5	10	..	4	4	14	1	..
Sheep	1	1	14	14	4	3	..	..
Fruit/vegetables	..	1	..	..	9	14	1	3
Beef-dairying	..	..	1	1	..	..	4	1
Beef-horses	2	3	2	4	1	..	4	6
Beef-sheep	5	3	18	21	..	4	4	4
Beef-fruit/vegetables	1	..	..	1	4	1	10	10
Beef-sheep-horses	2	2	2	2	..	..	..	..
Beef-sheep-fruit	..	..	..	..	..	..	1	1
Beef-horses-vegetables	..	..	..	..	..	..	..	1
Other farming	4	5	1	2	5	6	1	2
Unknown farming	..	..	3	2	..	..	..	..
Non-farm use	5	5	..	..	..	..	1	1
Subdivision	..	2	..	2	..	..	..	1
Nil	11	20	1	10	14	20	2	7
Unknown	33	26	31	24	23	13	6	6
Totals	101	102	98	111	90	92	87	99

Table 5: Percentages[a,b] of Area Sampled[c] in 1974 *by Main Land Use:* 1974 *and* 1978

Main Land use	Kilmore		Lillydale	
	1974	1978	1974	1978
Beef cattle	16.6	14.8	43.1	40.8
Dairy cattle	1.9	1.2	9.8	8.2
Horses	0.3	2.6	0.9	1.2
Sheep	9.7	8.6	..	..
Fruit/vegetables	..	0.1	1.7	2.9
Beef-dairying	0.6	0.6	3.9	0.5
Beef-horses	1.4	2.7	2.1	5.3
Beef-sheep	19.8	24.4	14.0	15.4
Beef-fruit/vegetables	0.1	1.4	7.0	6.5
Beef-sheep-horses	3.9	4.1	..	..
Beef-sheep-fruit	..	..	4.1	4.1
Beef-horses-vegetables	..	..	..	0.5
Other farming	0.7	0.9	1.1	1.7
Unknown farming	10.4	8.5	..	..
Non-farm use	0.8	0.8	0.6	0.6
Subdivision into less than 2 ha lots	..	1.7	..	0.5
Nil	2.1	5.0	3.7	3.7
Unknown	31.3	22.7	7.6	7.9

[a,b,c] See footnotes to Table 3.

Stability of Land Use on Different Types of Holdings

The 1974 sample included 237 holdings where both operational status and land use were known for 1974 and 1978, and of these, 189 had the same owner in 1974 and 1978. These two data sets were used to examine the incidence of changes in the main land use, as identified by the owners, on small versus large holdings, and on part-time versus full-time farms, with holdings classified according to their size and operator status in 1974. The main land use changed on one-third of the 237 holdings, and on one-quarter of those which did not change hands. In the case of small versus large holdings, changes were more common on small holdings, but chi-square tests indicated that the relationship was not statistically significant. In the case of part-time versus full-time farms, changes in land use were more than twice as common on holdings which were part-time farms in 1974 as on those which were full-time farms; chi-square tests indicated that the relationship was highly significant.[7] Thus, in the survey areas, part-time farming was associated with less stable land use than full-time farming. However, because of the greater average area of full-time farm holdings, it did not necessarily follow that most of the land whose use changed was in part-time farms.

Part-time farm holdings also changed hands more frequently than full-time farm holdings. Between 1974 and 1978, 22 per cent of part-time holdings were sold, wholly or in part, compared with only 11 per cent of full-time holdings, again a statistically significant difference between the two groups.[8]

The Changing Importance of Part-time Farming

The results in Tables 2 and 3 show that part-time farming increased in importance in the study areas between 1974 and 1978, both in terms of numbers of part-time farms and area operated by part-time farmers. Table 3 also shows that the increased area in part-time farms almost exactly matched the reduced area of full-time farms in each shire. Investigation of the particular holdings shifting from full-time to part-time status reveals that, in two-thirds of the cases, representing almost half the area shifting from full-time to part-time farming in the two shires, the same family continued to operate the farm; the shift to part-time status was a result of partial retirement and winding down of farm operations by the farmer, or his diversifying into off-farm activities, or the property passing to a son who already had an off-farm occupation.

The Permanence of Part-time Farming

Table 6 shows the 1978 status of 112 part-time farmers identified in 1974. Over half of the Kilmore farmers and almost two-thirds of the Lillydale farmers continued part-time farming on the same holdings in 1978. Of those who ceased farming between 1974 and 1978, most in Kilmore sold their holdings, while most in Lillydale did not. Most of those who continued as non-farmer landowners gave either ill-health/advancing age or low economic returns as their reasons for giving up farming.

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[7] Using 2 x 2 cross-tabulations, chi-square = 10.59 for all 237 holdings where land use was known, and 7.86 for the 189 holdings where ownership did not change. Both results are significant at the 1 per cent level for 1 degree of freedom. More details are given in Wills (1982).

[8] Chi-square = 4.53. Significant at the 5 per cent level for 1 degree of freedom.

Table 6: 1978 *Status of* 1974 *Part-Time Farmers*

Status in 1978	Kilmore	Lillydale
Still part-time—same enterprise	25	27
changed enterprises	9	5
no information	..	1
Still own land—not farming	4	10
land rented out	..	1
no information	7	3
Full-time farmer in 1978	..	1
Ceased renting sample holding	1	1
Sold holding between 1974 and 1978	11	2
Sold part of holding—still part-time	..	1
not farming	..	2
no information	1	..
Total	58	54

Despite the substantial proportion of operators ceasing farming during the four-year period, the survey results do not suggest that part-time farming is particularly unstable or transitory, except in comparison with full-time farms, as described above. For part-time farmers interviewed in 1974–75, the average time spent part-time farming was 4.5 years in Kilmore and 13 years in Lillydale. In 1978, after omitting dropouts and adding additional part-time farmers interviewed in the second survey, the average time spent part-time farming rose to 9 years in Kilmore, while falling to 12 years in Lillydale. The main reason for the difference is that most of the Kilmore farms were of recent vintage, with few elderly/long-time farm operators, whose retirement was responsible for the slight fall in Lillydale.

Cross-tabulations show that the continuation or cessation of part-time farming between 1974 and 1978 was not simply related to age, to years of farming experience, farming background, or resident/absentee status. For example, the average time spent part-time farming (in 1974) was 8.8 years for those ceasing farming, and 8.2 years for those continuing. It did appear that large (mainly commercial) part-time farms were a little more likely to continue in operation than small (frequently recreational) part-time farms; 67 per cent of the large part-time farmers identified in 1974 continued to farm in 1978, compared with 58 per cent of the small farmers, and in 1978, the average time spent part-time farming was 12 years for large farms and 9 years for small farms.

The Profitability of Part-time Farms

Of 60 part-time farmers interviewed in 1978–79, 44 provided sufficient farm financial data to estimate net farm returns for 1977–78; 36 provided sufficient data to estimate net farm returns for previous years, 18 of them for the five-year period 1973–74 to 1977–78. The results are summarised in Appendix Table 2. Few of the part-time farms were profitable ventures during the period, especially in the middle years 1974–75 to 1976–77, when beef prices were depressed. Fewer than one farm in four yielded a surplus after deducting cash expenses and depreciation in 1977–78, and just over one in four over the full five years; of a total of 136 years of farm financial data obtained, only 29 years yielded a surplus. The typical 5-year cash operating loss appeared to be $10–15 000 for both large and small part-time farms. However, these calculations ignore increases in the market value of farm land. According to the Victorian Valuer-General's Property Sales Statistics, between 1973–74 and 1977–78 prices paid for rural holdings rose about 100 per cent in Kilmore Shire

and 50–100 per cent in Lillydale Shire and in Healesville Shire, just across the Yarra from the Lillydale survey area. Estimates of capital gains from rural land in Appendix Table 3 suggest that between 1973–74 and 1977–78 (paper) capital gains on the surveyed part-time farms would have been $30–40 000 for a typical small farm and $100–150 000 for a typical large farm—far in excess of the operating losses.

In contrast to the part-time farms, the small number of full-time farms for which data were obtained generally yielded a modest cash surplus (see Appendix Table 2). As a result of a larger average area, capital gains for the typical full-time farm would exceed those estimated for large part-time farms.

Reasons for Farming

The preceding results suggest that few of the part-time farmers farm solely or mainly for financial reasons; while the capital gains from land on the farms were substantial, it is not necessary to farm the land to realise these gains, nor does it seem likely that the capital gains available from farm land were sufficiently superior to those available from other real estate (and other assets) available to Melbourne investors in the mid-1970s, to offset the operating losses experienced on most farms.

In the interview survey farmers were asked to identify reasons for farming which had occurred to them from a prepared list, and then to rank them according to their relative importance along a seven point scale, marked from 0 (completely unimportant) to 6 (extremely important). Some farmers selected only 2 or 3 reasons; others selected and ranked almost all of the nineteen possible reasons given. Table 7 summarises the results.

Table 7: Average Weights[a] of Reasons Given for Farming, 1978

Reasons	Part-time farms					Full-time farms
	Kilmore		Lillydale		All	
	Small	Large	Small	Large		
Source of income	2.8	3.8	1.7	2.1	2.9	4.6
Investment in farm property	2.0	2.8	2.2	2.2	2.3	2.0
Tax reduction	1.3	2.5	0.5	1.5	1.5	0.2
Complements off-farm business	0.9	1.9	0.1	0.8	0.9	..
Diversify income	0.9	0.9	0.2	0.8	0.7	..
Enjoy rural life	4.7	5.0	5.3	4.3	4.8	4.4
Enjoy farm work	4.5	5.3	4.0	3.8	4.3	4.7
Get away from city	2.4	3.3	3.3	3.4	3.1	2.0
Good family environment	2.2	2.5	3.7	3.1	2.8	2.1
Recreation	3.0	2.3	1.6	1.3	2.0	..
Retirement interest	2.7	2.5	2.8	1.2	2.2	1.9
Personal/family ties to farming	..	0.5	0.5	0.5	0.4	0.6
Intend to farm full-time	1.3	1.8	1.3	1.2	1.4	..
Interest in a particular enterprise	1.8	2.1	1.6	2.8	2.1	2.6
Need land for animals	2.5	0.6	1.3	1.5	1.5	0.6
Control pasture/weeds	0.4	0.5	0.4	1.8	0.8	1.2
Food self-sufficiency	1.8	0.7	1.1	1.4	1.3	1.0
Can't get out of farming	0.8	0.9	..	0.5	0.6	1.0
Always a (part-time) farmer	0.3	0.8	0.7	1.1	0.7	2.5

[a] Obtained by adding the scores obtained on the 0-6 scale and dividing by the relevant number of farmers. The higher the score, the more important the reason.

These results are generally consistent with those of the 1974–75 survey (see Wills 1978, Table 5). Financial considerations (e.g., income, investment, tax reduction) were a reason for farming on most part-time farms, but on the majority they were considerably less important than way of life/recreation/retirement reasons. Of fifty-six part-time farmers who ranked their reasons, forty-one ranked way of life/recreation/retirement reasons ahead of financial reasons, thirteen the reverse, and two ranked them equally.

It is interesting to compare the part-time farmers' responses to the responses of full-time farmers given in the last column of Table 7. The major differences are the greater weight given to income and having always been a farmer, and the lesser weight given to tax reduction, by full-time farmers. However, the way of life motivation for farming is just as strong for full-time as for part-time farmers.

Of twenty-seven part-time farmers interviewed in both 1974–75 and 1978–79, seventeen gave the same or similar reasons for farming in each survey. Their responses suggested that, as the part-time farmers' age and experience increased, they became more skeptical about becoming full-time farmers, and put more emphasis on farming as a retirement activity. The relative significance of financial and way of life reasons for farming changed only slightly, in favour of financial reasons.

Comparison of farmers' reasons for part-time farming with the farm financial data obtained showed no systematic relationship between reasons and the profitability of individual farms. It is of course possible that the predominance of non-financial reasons for part-time farming could be an effect, rather than a cause, of farming losses on the survey farms, given operators' desires to rationalise their farming failures; however, if the responses obtained were the result of such *ex post* rationalisation, it seems unlikely that part-time farming would continue if the losses persisted.

In an attempt to discover the farmers' attitudes to their farms as money-making/money-losing activities, they were asked to specify the lowest after-tax profit/greatest after-tax loss per year which they would accept from the farm over five years rather than discontinue farming. The results are consistent with the predominance of non-financial reasons, although given the diversity of farmers' financial situations and arrangements, and possibly varying interpretations of what constitutes a "loss", they have to be interpreted with caution (see Appendix Table 4). The major reasons given for willingness to accept farming losses over five years were the availability of off-farm income (for part-time farmers) and offsetting capital gains from the farm land and improvements.

Another way to test the part-time farmers' financial interest in farming is to examine their attitudes to and knowledge of the income tax benefits available to primary producer taxpayers. Sixty-nine per cent and 93 per cent respectively of the small and large part-time farmers filed as primary producers for income tax purposes. Fifty per cent and 61 per cent respectively said that they were aware of the Federal Government's changes to tax averaging in the 1978 Budget, restricting averaging benefits to farm-derived income.

Given the diversity of the backgrounds and circumstances of the part-time farmers interviewed, it is difficult to generalise about the importance of financial motives in part-time farming around Melbourne. The most reasonable conclusion to be drawn from the results is double-barrelled:

(i) a majority of part-time farmers farm primarily for way of life/recreational reasons rather than for financial reasons; and

(ii) most are concerned about the financial results of part-time farming, however the emphasis on financial results varies according to individual circumstances. Taking an extreme example, full-time farmers, for obvious reasons, generally put more emphasis on financial results than do part-time farmers.

Based on these conclusions, it might at first seem that part-time farmers will generally be less responsive than full-time farmers to changes in the agricultural economy. However, on further reflection it seems likely that urban-based part-time farmers who do not depend on farm returns may also be more responsive to economic changes than full-time farmers. The reason is that part-time farmers with stable off-farm incomes, and especially those with relatively small farms, will generally be far less risk-averse in their farm decision-making than full-time farmers in equivalent circumstances. This would be consistent with the earlier finding, that land use on part-time farms was less stable than on full-time farms, although an obvious alternative interpretation would be that part-time farmers have more ability to indulge their farming preferences regardless of profits. However, in the case of several part-time farmers surveyed, where the farmer made a complete switch to horses from beef cattle (see Table 4), the enterprise switch was both rapid and consistent with shifts in relative returns.

Productivity of Part-time Versus Full-time Farms

Table 8 compares rates of resource use and gross and net returns per hectare and per worker on part-time and full-time survey farms, and also includes rates of resource use calculated from Australian Bureau of Statistics' (A.B.S.) figures for the shires of Kilmore, Lillydale and Healesville for 1977–78. In order to avoid an unfair impression of the productivity of the part-time farms, four large part-time farms where a full-time farmer had diversified into off-farm contracting or livestock agency work were reclassified as full-time farms in drawing up Table 8. Not all farmers provided data on rates of resource use; the numbers responding are given in the table.

Both the results in Table 8, and similar comparisons made using A.B.S. and survey data for 1974 (Wills 1978, Table 8), show that, on average, part-time and full-time farmers have similar rates of fertilizer use and stocking, and similar gross returns per hectare of pasture (cropping activities were excluded from the comparisons in Table 8). The figures for part-time farms are more variable than for full-time farms.

There are differences between part-time and full-time farms, and especially between small part-time farms and full-time farms, in gross returns per worker, and net returns per hectare and per worker. The main reasons for these differences are: (i) fewer livestock per worker on the small part-time farms (no doubt partly a result of the substantial "labour overheads" involved in managing small numbers of livestock), and (ii) higher expenditures per hectare on small part-time farms and large part-time farms in Lillydale, compared to most full-time farms. However, if the large part-time farms where off-farm work was only a sideline had not been classified as full-time in calculating the figures in Table 8, these comparisons would have altered in favour of the large part-time farms.

Beef cattle production was by far the most common enterprise on the farms surveyed. As an alternative test of the efficiency of the farm operations, both part-time and full-time farmers were asked to give details of their breeding

Table 8: Rates of Resource Use and Gross and Net Returns per Hectare and per Worker on Part-Time and Full-Time Farms and in the Corresponding Shires, 1977–78[a]

	Kilmore				Lillydale				
	Shire	Full-time farms	Part-time farms		Shires		Full-time farms	Part-time farms	
			Small	Large	Lillydale	Healesville		Small	Large
Average area operated (ha)	n.a.	345	27	174	n.a.	n.a.	373	11	130
Percentage of farmers using fertiliser on pasture	n.a.	63 (8)	70 (10)	50 (10)	n.a.	n.a.	83 (6)	33 (9)	57 (14)
Rate of fertiliser use per hectare of pasture (tonnes)	0.03	0.07	0.11	0.08	0.08	0.07	0.09	0.12	0.18
Cattle equivalents per hectare of pasture[b]	0.85	0.63 (11)	0.99 (15)	0.94 (11)	1.36	1.46	1.08 (8)	1.01 (16)	1.23 (16)
Cattle equivalents per worker equivalent[c]	167	110	43	174	n.a.	n.a.	185	32	127[d]
Gross returns per hectare of pasture ($)	n.a.	46 (5)	49 (7)	40 (8)	n.a.	n.a.	71 (4)	65 (9)	65 (12)
Gross returns per worker equivalent ($)	n.a.	9 000	1 600	6 900	n.a.	n.a.	15 700	1 900	5 400
Net returns (loss) per hectare of pasture ($)	n.a.	3 (5)	(62) (7)	(4) (8)	n.a.	n.a.	12 (4)	(174) (9)	(92) (11)
Net returns (loss) per worker equivalent ($)	n.a.	700	(2000)	(700)	n.a.	n.a.	2 700	(5 000)	(7 500)

[a] Figures in parentheses are numbers of farmers responding in each category.

[b] Assuming 1 beast = 1 horse = 8 sheep.

[c] Not differentiating between males and females and assuming that a full-time worker works 40 hours per week and that a child equals ½ an adult worker.

[d] Omitting one beef cattle stud and one racehorse stud with large labour inputs.

and selling routines and of their regular beef husbandry operations. The results, set out in Table 9, provide a measure of organisational and managerial skills and effort applied to the beef enterprise by the different groups of farmers. As in Table 8, large farms where off-farm was a sideline are classified as full-time.

Table 9: Organisation of the Beef Cattle Enterprise on Survey Farms

	Part-time farmers		Full-time farmers
	Small	Large	
Number of farms running beef cattle—			
breeding cattle	11	20	13
buying and selling only	5	4	4
Average herd size	26	111	185
Percentages of farmers carrying out various husbandry operations—			
drenching for internal parasites	75	88	100
control of external parasites	56	83	100
vaccination	38	75	76
marking calves (breeding only)	55	95	100
Percentages of farmers with definite selling plans—			
age/type of cattle	69	83	82
time of sale [a]	63	67	82
Percentages of farmers with definite breeding plans—			
age at first calving	56	82	83
time of calving [a]	40	85	77

[a] In terms of a particular month or months during the year.

The results in Table 9 suggest that the beef cattle enterprise is less carefully managed on small part-time farms than on full-time farms, but there appears to be little difference in the management (and presumably also in the technical efficiency) of beef cattle production on large part-time farms and full-time farms. The apparent managerial efforts on the different types of farm are consistent with herd size differences, assuming that high overheads tend to discourage the owners of small herds from undertaking all possible beef husbandry operations.

The productivity and management comparisons do not reveal whether part-time livestock farmers achieve the same technical and economic efficiency in their use of variable inputs as comparable full-time farmers. While, on average, the two groups obtained about the same gross output per hectare, using similar amounts of variable inputs, rates of output and input use were more variable on the part-time farms. This greater variability could be due to a diversity of attitudes to farming efficiency and profitability amongst part-time farmers. It could also be due to the diversity of their off-farm economic circumstances, for example, differences in the opportunity cost of farm labour across part-time farms, given the wide variety of off-farm jobs reported in Wills (1982).

The above results do suggest that, due to their smaller area and livestock numbers, part-time farms, and especially small part-time farms, are subject to high average fixed costs unavoidably associated with any small grazing enter-

prise. These include the costs of yards and fences required to handle livestock, rates and interest charges which are relatively higher for smaller parcels of land, and labour overheads such as regular stock and fence inspections. Since most part-time farmers expressed a liking for farming, it is reasonable to conclude that the high average fixed costs involved in small-scale farming are generally offset by the direct satisfaction derived from running a farm. Therefore, although most part-time farms yield lower net returns per hectare and per worker than comparable full-time farms, such results do not necessarily indicate inefficient resource allocation.

Part-time Farming and Income Tax

Most of the part-time farmers interviewed, and practically all of the large part-time farmers, were aware of the benefits of primary producer status for income tax purposes.[9] Two different approaches were tried to obtain an indication of the income tax savings obtained by the part-time farmers as a result of their farming activities. One was to ask each farmer directly, roughly what annual savings he/she had achieved over the preceding 3 or 4 years. The second was to make an estimate based on figures for net primary production income/losses in the farm tax returns supplied by many of the farmers interviewed.

Of the part-time farmers answering the direct question about the value of tax savings achieved, 22 per cent estimated that their annual savings amounted to "thousands of dollars", 29 per cent at least $1 000, and 47 per cent at least a few hundred dollars. In the case of large part-time farms, the corresponding figures were 29 per cent, 37 per cent, and 50 per cent.

Turning to the primary production losses recorded in farmers' tax returns, it was assumed that these would be offset against non-farm income, which was substantial in most cases (the exceptions being the few commercial farms where off-farm work was a sideline). Thus, in order to estimate the income tax savings due to farm losses, it was necessary to guess the marginal tax rate applying to the amount of non-farm income offset by those losses. With the simplification of the income tax rate scale in 1976, this could be done with some confidence, even without reliable information about most households' non-farm receipts and expenditures. No account was taken of possible extra savings available as a result of tax averaging and income equalisation deposits available to farmers. Allowance was made for income splitting within families when determining the appropriate marginal tax rate; as a consequence, in practically all cases, the marginal tax rate applying to the non-farm income was assumed not greater than 46 per cent. Taking into account these omissions and assumptions, the estimates of income tax savings due to farming activities are believed to be conservative.

The part-time farmers' taxable incomes/losses and estimated tax savings resulting from farming activities are set out in Table 10. Although only a limited amount of tax information was obtained, these results, together with the answers to direct questions about tax savings, clearly indicate that, in the mid-1970's, a majority of the part-time farmers were able to substantially reduce the tax payable on their non-farm incomes, as a result of farming losses.

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[9] See **Reasons for Farming**, above.

Table 10: Farm Taxable Incomes and Estimates of Income Tax Savings on Part-Time Farms, 1973–74 to 1977–78[a]

	Small	Large
1977–78—		
Number of farms with farm tax—		
profit	1	7
loss	9	13
Average tax profit (loss) ($)	(2 700)	(9 500)
Average tax loss per farm making a loss ($)	(3 200)	(16 900)
Estimated tax savings per farm making a loss ($)	1 200	7 500
1973–74 to 1976–77—		
Number of separate tax returns	24	46
Number of returns showing a tax loss	20	41
Average tax loss per farm making a loss per year ($)	(4 800)	(9 800)
Estimated tax savings per farm making a loss per year ($)[b]	1 750	4 200
1973–74 to 1977–78—		
Number of farms with five-year tax—		
profit	1	3
loss	5	7
Average tax profit (loss) over five years	(17 600)	(18 000)

[a] For 30 farms supplying tax records. Note that tne farm profits/losses reported for tax purposes generally differed from the net returns reported in Appendix Table 2.

[b] Based on the 1976–77 income tax rate scale.

Discussion

The results presented above are of some assistance in assessing the market allocation of land on the urban fringe, despite the subdivision controls in place in each shire at the time of the surveys.[10] First, they include data on actual market outcomes, in terms of land operation and use. Second, since part-time/"hobby" farmers represent an important and rapidly growing fraction of both landowners and the land itself, their motivations and behaviour are, and will be increasingly, important factors determining land use on the urban fringe.

The limitations of these results in assessing urban fringe land allocation must also be recognised. This study was designed to investigate selected aspects of land allocation over a relatively short period. A proper investigation of the functioning and performance of urban fringe land markets would require investigation of more participants (e.g., pure investors, developers), and other variables (e.g., general business conditions, asset prices), and extend over a much longer time period (recent studies of urban fringe landowners and of part-time farmers have emphasised the importance of the family life-cycle in determining land allocation, e.g (Brown, Phillips, and Roberts 1981; Kada 1980).

[10] In Kilmore the statutory subdivisional minima in the study area varied from no subdivision entitlement to 40 ha; in Lillydale from 40 ha to 16 ha. However, these subdivision restrictions were not very effective because of the existence of large numbers of parcels with separate titles which predated the planning controls.

"Hobby Farms" and "Rural Retreats"

From a land use policy perspective, one of the most important survey findings is also one of the most obvious; namely, that while most land holdings in the survey areas are relatively small, a large proportion of the total land area is contained in a few large holdings. In 1978, the largest 10 per cent of sample holdings accounted for 47 per cent of the sampled area in Kilmore and 51 per cent in Lillydale. Conversely, hobby farm-size holdings of 16 hectares and less in Kilmore and 8 hectares and less in Lillydale accounted for only 4.5 per cent and 5.5 per cent of the area in the respective shires.

This distinction between land holdings and land area is an important one for land policy (Brown, Phillips, and Roberts 1981). Most of the services from rural land, such as scenery, native flora and fauna, and pollutant absorption, which planners are concerned to maintain, now and in the future, are more closely correlated with rural land area than with number of separate holdings. This raises questions about the validity of concerns expressed about the proliferation of small "hobby farms" and "rural retreats" (e.g., Wagner 1975). If, as in this survey, such small holdings account for not more than 10 per cent of the land area, then even if they are seriously mismanaged, they will not create major problems for the rest of the community, unless there are large spillovers to neighbouring properties or to other land users. In fact, evidence of mismanagement is sketchy (e.g., Wagner 1975, pp. 25–26); in the present case, neglect of small rural properties is not a major problem since both the 1974–75 and 1978–79 surveys show that small part-time farmers use far more labour and spend much more on farm inputs, on a per-hectare basis, than do rfull-time farmers.

The productivity and management comparisons made in Tables 8 and 9 einforce the view that the adverse land-use consequence of "hobby" farms are overstated. While the results for individual small part-time farms are quite variable, the per-hectare and beef enterprise comparisons suggest that, as a group, they are not grossly inefficient in a purely technical sense. Due to the high average fixed costs involved in small-scale farming, many small part-time farms are undoubtedly operating high up on the downward-sloping segment of their average cost curves, but if small amounts of farm work give the farmer considerable satisfaction, this will not necessarily result in inefficient allocation of agricultural land.

Changes in the Area of Agricultural Land

A particular concern of many environmentalists and planners, and some agriculturalists, is that changes in the ownership and use of urban fringe agricultural land will render it unavailable for future agricultural production at any reasonable cost. I have outlined elsewhere why I believe this to be of no concern in Australia (Wills 1980). In the areas surveyed, the only land possibly lost to agriculture between 1974 and 1978, in the sense of being prohibitively expensive to convert back to commercial agriculture, was land included in the 1.7 per cent of land in Kilmore and 0.5 per cent of land in Lillydale divided into lots of less than 2 hectares. The major change in the situation was the progressive replacement of full-time farms with (frequently commercial-sized) part-time farms which, according to the per-hectare comparisons in Table 8, should cause no great change in agricultural output from the survey areas.

Part-time Farming as an Urban Fringe Land Use

The importance of non-financial motivations for most part-time farmers, and their relative indifference to poor farm returns, suggest that part-time farming could remain an important and relatively stable urban fringe land use in the face of urban economic pressures. Together with knowledge of the large proportion of rural land in large farms, and the evidence that large part-time farms may be a little more stable than small part-time farms, this suggests that policies aimed at keeping future urban fringe land use options open might be designed to favour large part-time farms. In fact, more effort probably goes into extension, subdivision, rating, probate and income tax policies designed to assist full-time farms and/or smaller farms, than large part-time farms. This may be politically astute, and desirable on other grounds, but detrimental on the urban fringe.

Primary producer tax concessions and the progressive income tax scale do provide a counter-balance favouring large part-time farms. The tax calculations in Table 10 suggest that many urban-based part-time farmers are quite content to suffer large tax-deductable farming losses over an extended period, in return for the satisfaction of operating a farm and/or the prospect of a tax-free capital gain from farm assets at some future date. The resulting subsidy, from taxpayers to part-time farmers, is greatest for those on the highest marginal tax rates, who are likely to include most owners of large part-time farms.[11]

To the extent that it is desirable to have large farms continue on the urban fringe, the tax concessions presently available to primary producers have another advantage; interest payments on borrowings made to purchase land for farming are tax-deductible, leading to large deductions for those who buy very expensive urban fringe land, as long as it is farmed, despite the fact that its agricultural value may be only a fraction of the purchase price. Thus the present income tax laws are a major factor encouraging continued farming on the urban fringe.

Summary

Successive surveys of samples of rural landholdings in the shires of Kilmore and Lillydale, near Melbourne, were conducted in 1974–75 and 1978–79. The surveys collected information about changes in ownership and land use between 1974 and 1978 from 376 holdings selected from the shire rating rolls in 1974. Eighty-two part-time farmers were interviewed in person in 1974–75; 75 part-time and full-time farmers in 1978–79. Farmers were questioned about their personal background, farm and off-farm activities, reasons for farming, farm finances and future plans.

The number of separate rated holdings in the survey samples increased from 376 in 1974 to 404 in 1978, as a result of property divisions. The numbers and area of part-time farms increased substantially at the expense of full-time farms, and the numbers of unused holdings increased, but the total area farmed fell only slightly, from 74.1 per cent to 72.8 per cent in Kilmore, and from 88.2 per cent to 88.1 per cent in Lillydale. Changes in land ownership and use on the large number of small holdings in each shire had little affect on the overal

[11] There is no direct evidence available on the marginal tax rates of the owners of large part-time farms. Household incomes reported in the 1974–75 survey (Wills 1977, Table 15) suggest that most of these farmers will be in the higher tax brackets.

totals, since small holdings accounted for only a minor proportion of total land area. The relative insignificance of small holdings suggests that the concern frequently expressed about the adverse land-use consequences of "hobby farms" and "rural retreats" may be overstated.

Although about one-third of the part-time farmers identified in 1974 had ceased farming by 1978, the survey results did not suggest that part-time farming is particulary unstable or transitory. In 1978, the average time spent farming for farmers interviewed was 10 years. However, land use and farming on part-time farms were less stable than on full-time farms.

Few of the part-time farms surveyed were profitable in the mid-1970s, when beef prices were depressed; unlike the full-time farmers, most appeared willing to accept continuing losses in their farming activities. This was consistent with the finding that most part-time (but not full time) farmers surveyed put their farming way of life/recreation ahead of financial considerations, which was possible because most had high off-farm incomes. However, in the mid-1970s, negative farm returns were offset by capital gains on farm land, which greatly exceeded farming losses between 1974 and 1978, and by substantial savings on the income tax payable on many off-farm incomes, due to tax-deductible farm losses on a majority of part-time farms.

Comparisons of resource use and returns between part-time farms and neighbouring full-time farms suggested that large part-time farms were almost as productive as full-time farms, and small part-time farms somewhat less productive. They did not support the view that small "hobby" farms are generally badly managed.

The importance of non-financial motivations for most part-time farmers, and their relative independence of poor agricultural returns, suggest that they may play an increasingly important role in urban fringe land use in the future, and be instrumental in keeping alternative land use options open. In view of this, policy-makers concerned about urban fringe land use should carefully consider the effects of planning, rating, taxation, etc., policies on part-time farmers, especially the large commercial part-time farmers who are likely to own a substantial and increasing proportion of fringe land in the future.

Appendix Table 1: *Population and Sample Numbers and Sample Wastage,* 1974–75 *and* 1978–79 *Surveys*

	Kilmore		Lillydale (N. and W. Ridings)	
Total number of rated holdings in 1974 population	515		376	
Survey years	1974–75	1978–79	1974–75	1978–79
Total numbers in 1974 samples and equivalent[a] numbers in 1978	199	213	177	191
of which—				
No information on use of holding ..	64	48	20	21
Portions of operational holdings sampled previously.	12	11	20	19

[a] Some of the rated holdings sampled in 1974 had been subdivided into two or more rated holdings by 1978. The 1978 numbers do not include large numbers of less than 2 ha residential lots created by subdivision of 4 holdings in Kilmore and 1 holding in Lillydale

Appendix Table 2: *Net Returns from Farming:* 1973–74 *to* 1977–78[a,b]

	Part-time farms				Full-time farms
	Kilmore		Lillydale		
	Small	Large	Small	Large	
1977–78—					
Number of farms with net returns—					
positive	..	4	2	4	3
negative	10	5	8	11	4
Average net return per farm ($).	(1 500)	(1 400)	(1 600)	(11 000) (6 200)[c]	2 700
1973–74 to 1976–77—					
Number of years farm financial data available.	17	23	19	33	20
Number of years showing positive net returns.	2	3	7	7	14
1973–74 to 1977–78—					
Number of farms with net returns over five years—					
positive	..	2	1	2	4
negative	3	3	2	5	1
Average net return over 5 years ($).	(13 800)	(11 500)	(11 600)	(43 600) (9 700)	12 800

[a] Here defined as farm sales plus livestock inventory changes, minus farm cash expenses and estimated depreciation.

[b] Negative values in parentheses.

[c] Average omitting one large stud beef cattle property.

Appendix Table 3: Estimates of Capital Gains from Rural Land on Part-Time Farms Between 1973–74 and 1977–78

	Kilmore		Lillydale	
	Small	Large	Small	Large
Average area owned, 1977–78 (ha) ..	25.7	149.4	11.1	109.0
Estimated average value of rural land, excluding residences, 1977–78 ($/ha)[a].	3 000	1 700	7 500	3 750
Estimated average property value, 1977–78 ($)	77 000	254 000	83 000	409 000
Estimated average property value 1973–74 ($)[b].	38 500	127 000	50 000	245 000
Estimated average capital gain on rural land 1973–74 to 1977–78($).	38 500	127 000	33 000	164 000

[a] Based on farmers' estimates of land values and on sales values for unspecified rural land as recorded in *Property Sales Statistics*, 1977 and 1978, published by the Victorian Valuer-General's Department. The figures in the table are weighted averages of these values for different shires and holding sizes.

[b] Averages of sales values for unspecified rural land, as recorded in *Property Sales Statistics*, 1973 and 1974.

Appendix Table 4: Minimum Annual Profit/Maximum Annual Loss from Farming Acceptable Over Five Years

	Part-time farmers		Full-time farmers
	Small	Large	
Number of farmers questioned	29	31	15
Number of useful answers	22	29	14
of which—			
require profit	6	4	5
must break even	1	2	1
accept loss	15	23	8
Number giving specific figures	13	14	9
of which—			
greatest profit required ($/year)	5 000	3 000	5 500
greatest loss acceptable ($/year)	(5 000)	(30 000)	(10 000)
average ($/year)	(1 180)	(5 500)	(1 280)

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