

AN EVALUATION OF
FARM OWNERSHIP SAVINGS ACCOUNTS

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PREFACE

The Farm Ownership Savings Scheme is aimed at assisting those New Zealanders willing to save towards the eventual ownership of a farm. As at 31.3.81 the Scheme has attracted deposits of nearly \$29 million.

This paper, written by Mr K.B. Woodford, lecturer in the Department of Farm Management and Rural Valuation at the College, presents an investment analysis of the use of the Scheme.

Comments are made in the paper regarding the differential returns obtained through savings over different time periods, alternative savings strategies under the Scheme and suggestions are made on alterations to the Scheme.

P.D. Chudleigh,
Director.

SUMMARY

Farm Ownership Savings Accounts are a popular method of saving for farm purchase and entry into sharefarming. As at 31 March 1981 there were nearly 7,000 account holders and deposits totalled approximately \$29 million.

The investment returns that can be obtained from Farm Ownership Accounts are dependent on the savings period. For Special Farm Ownership Accounts the return on capital invested can be in excess of 40 per cent per annum where the savings period is three years, declining to less than 15 per cent per annum where the savings period is ten years. For Ordinary Farm Ownership Accounts the return on capital is approximately 20 per cent per annum where the savings period is three years dropping to approximately ten percent where the savings period is ten years.

Owing to the effects of inflation, increases in the cash deposits required for farm purchase are likely to outstrip people's ability to save the necessary deposit through the Farm Ownership Account Scheme. Accordingly, these accounts should be considered as either a means of saving for entry into sharefarming or as a secondary means of saving for farm purchase.

Aspiring farmers who have limited assets should consider saving initially in a Home Ownership Account rather than a Farm Ownership Account. Current incentives for first home ownership make this an attractive method of saving towards eventual farm ownership.

It can be argued that Farm Ownership Accounts as they are set up at present are biased in favour of those people who, on account of their access to inherited or family wealth, only need to save for a short period and at the expense of those people who must save from wages and salary over a longer period. It would seem doubtful that this was ever an intention of those who designed the scheme and hence consideration should be given to changing this feature.

1. INTRODUCTION

The Farm Ownership Savings Scheme was introduced by Government in 1974. According to the 1975 Annual Report of the Rural Banking and Finance Corporation of New Zealand, the purpose of the scheme was to "assist farm workers, sharemilkers, students and others intending to take up farm ownership to save an adequate deposit towards the purchase of their first farm". However, by 1980 the objectives appeared to be more modest, for the Rural Bank Annual Report of that year states "the objective of the scheme is to assist with the settlement of young farm workers and others associated with the farming industry who have a modest income but regular savings habits by offering a form of savings which will, to some extent, maintain their farm purchasing power in the face of rising land costs and inflation".

The purpose of this paper is to appraise the merits of farm ownership accounts from the viewpoint of aspiring farmers and to evaluate the capacity of the Farm Ownership Savings Scheme to fulfill the stated objectives. Suggestions are provided as to how the scheme could be improved.

2. AN OUTLINE OF THE SCHEME

2.1 Ordinary Farm Ownership Savings Accounts

When the scheme was first introduced in 1974 there was only one type of account, now known as an "Ordinary Farm Ownership Account". Intending farmers can open these accounts at the Post Office Savings Bank, at Trustee and Private Savings Banks, or with a number of Permanent Building Societies.

The first step after opening an account is to save a \$250 qualifying deposit. Thereafter, savings of up to \$5,000 per annum (\$3,000 per annum prior to 1980) may be made. When the intending farmer purchases his farm or goes sharefarming, these savings attract a non-taxable purchase grant from the government. The size of this grant depends on the savings period:

<u>Savings Period in Complete Years</u>	<u>Grant as Percentage of Savings</u>
3	25
4	25
5	25
6	30
7	35
8	40
9	45
10	50

4.

Prior to 1980 the minimum period of savings was five years for farm purchase and three years for sharefarming. The minimum period of savings is now three years for both farm purchase and sharefarming.

Interest of three percent per annum is paid on savings. Prior to 1980 this interest was not regarded as eligible savings for the calculation of a purchase grant but this position was reversed by an amendment passed in that year. However, the \$5,000 maximum eligible savings in any one year includes both deposits made by the account holder and interest earned. The Inland Revenue Department has ruled that all interest is assessable income for tax purposes in the year in which it is credited to the account (pers com. Christchurch Office of Inland Revenue Department).

The maximum amount that may be held in an account is \$60,000.

Table 1 sets out the total sums available to an intending farmer for farm purchase where that intending farmer has saved an initial deposit of \$250 and annual savings thereafter of \$5,000.

TABLE 1

Deposits and Accumulated Returns from Savings
in Ordinary Farm Ownership Accounts

Period of Savings (Years)	Total Deposits by Account Holder (\$)	Accumulated Interest (\$)	Purchase Grant (\$)	Total Sum Available for Farm Purchase (\$)
3	15,250	477.69	3,812.5	19,540.19
4	20,250	949.52	5,062.5	26,262.02
5	25,250	1,585.51	6,312.5	33,148.01
6	30,250	2,390.57	9,075.0	41,715.51
7	35,250	3,369.79	12,337.5	50,957.29
8	40,250	4,528.73	18,112.5	62,891.23
9	45,250	5,872.08	20,362.5	71,474.58
10	50,250	7,405.73	25,125.0	82,780.73

2.2 Special Farm Ownership Savings Accounts

Special Farm Ownership Accounts were introduced in December 1976. These accounts do not provide for a purchase grant but instead provide for a tax rebate of 45 cents for each dollar saved. This rebate is claimable in the year that savings are made. The maximum annual rebate that may be claimed is \$2,250 being 45 cents per dollar on maximum savings of \$5,000. (Prior to 1980 the maximum rebate was limited to \$1,800).

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Interest of three per cent per annum is paid on savings. Since 1980 this interest qualifies for a tax rebate with the proviso that the combined total of savings and interest eligible to receive the rebate cannot exceed \$5,000 in any year.

It is not possible to operate a Special Account and an Ordinary Account at the same time. However, an existing Ordinary Account may be "frozen" and a Special Account opened. Once an account is frozen no more funds may be deposited in it but the purchase grant is calculated on the basis of the combined savings period for both accounts.

2.3 Eligibility Criteria

Any person wishing to open an account must be over the age of 15 and satisfy at least one of the following criteria:

- (i) be a pupil at a secondary school in New Zealand and certify an intention to become a farmer in New Zealand; or
- (ii) be undertaking, at any university or other similar institution in New Zealand or elsewhere, a course of study which will be of material assistance in enabling him to become an efficient farmer; or

- (iii) be exclusively or principally engaged or employed in the farming industry in New Zealand or in any associated industry servicing the farming industry in New Zealand; or
- (iv) have had other relevant experience which will assist or enable him to become an efficient farmer; or
- (v) is the spouse of a depositor.

To actually receive the benefits of the scheme at the time of farm purchase or entry into sharefarming, account holders must:

- (i) be New Zealand citizens;
- (ii) not have had a financial interest in land where the capital value of that interest exceeds \$100,000 (this limit is reviewed annually);
- (iii) have had at least three years practical farm experience since opening the account; and
- (iv) have spent at least two of the last three years gaining farm experience on the same type of farm as that purchased.

These last two conditions do not apply to a person whose spouse is also a depositor as long as the conditions have been fulfilled by the spouse. The same requirements apply to sharefarming.

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2.4 Withdrawal from the Scheme

Ordinary account holders who fail to realise their ambition of sharefarming or farm purchase and consequently withdraw from the scheme receive their contributions plus the three percent per annum contributions. Special account holders receive their contributions net of the tax rebates received.

It is possible to convert Farm Ownership Accounts to Home Ownership Accounts but the limit on annual saving for these accounts is currently (December, 1981) \$3,000. Benefits on any additional savings are lost.

It is possible to withdraw money from the scheme for sharefarming and still save for farm purchase. As long as \$250 is left in the account, the original qualifying date is retained.

For further details of Farm Ownership Savings Accounts, readers should refer to the Farm Ownership Savings Scheme Handbook published by the Rural Bank or else to the Farm Ownership Savings Account Act of 1974 and its subsequent amendments (1976, 1977, 1980).

3. LEVEL OF PARTICIPATION IN THE SCHEME

The number of account holders as at 31 March in each year together with the accumulated savings held in these accounts are shown in Table 2. These figures indicate that the Special Accounts are much more popular than the Ordinary Accounts. In addition, it is evident that Special Account deposits are increasing at an accelerating rate with more than \$11 million deposited in the 1981 financial year, whereas Ordinary Account deposits are almost static.

TABLE 2

Year	Ordinary Accounts		Special Accounts	
	Number	Total Savings (\$ million)	Number	Total Savings (\$ million)
1975	22	n.a.		
1976	173	0.19		
1977	349	0.44	480	0.83
1978	595	0.79	1,356	3.05
1979	688	1.56	2,465	7.02
1980	867	1.69	3,533	15.61
1981	997	2.09	5,935	26.82

10.

The number of account holders who have used their savings to assist farm purchase or entry into sharefarming is shown in Table 3. When analysing these figures it should be remembered that most account holders have not been saving for sufficient time to be able to obtain the scheme benefits.

TABLE 3

Number of Account Holders Withdrawing Savings
For Farm Purchase or Entry into Sharefarming

Period	<u>Ordinary Accounts</u>		<u>Special Accounts</u>	
	Farm Purchase	Share- farming	Farm Purchase	Share- farming
Year ending 31 March 1980	0	4	0	0
Year ending 31 March 1981	11	11	17	47
1 April 1981 - 23 June 1981	6	6	64	41

4. INVESTMENT RETURNS

The investment returns are calculated as the internal rate of return according to the principles of discounted cash flow analysis. These returns may be considered as the effective rates of interest earned on savings. In other words, they are the post-tax annual rates of interest that would need to be earned if the money was invested in a bank account so as to obtain the same amount of money as is withdrawn from the Farm Ownership Account at the time of farm purchase.

4.1 Ordinary Farm Ownership Accounts

In calculating the investment returns the following assumptions are made:

- (i) An initial deposit of \$250 is made.
- (ii) Subsequent savings of \$5,000 are deposited in the account at one yearly intervals, the first \$5,000 being deposited exactly one year after the initial \$250.
- (iii) No tax is paid on interest.
- (iv) The farm is purchased three months after the last deposit is made.

The percentage returns received from these investments are shown in Figure 1. Two major points emerge:

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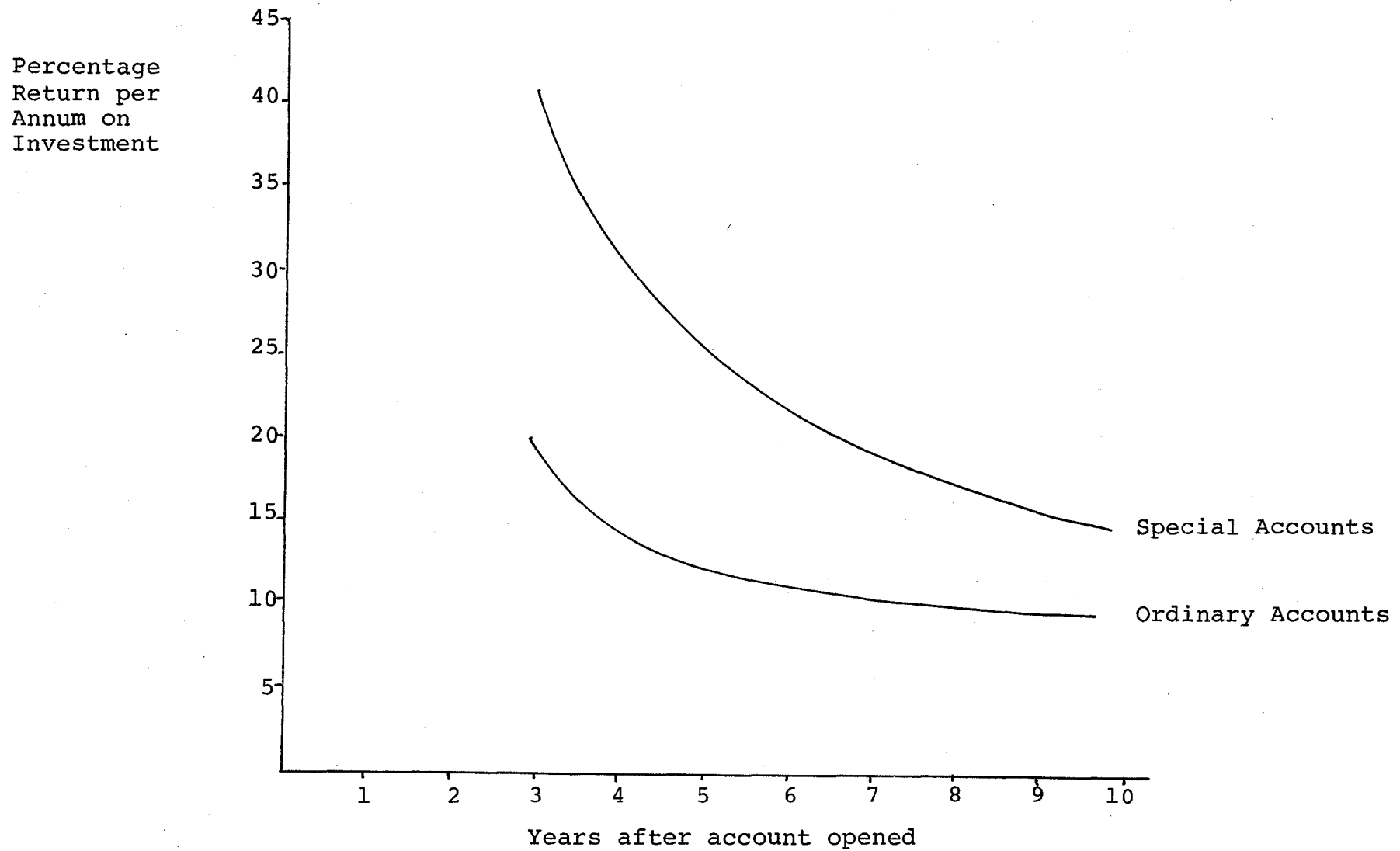
- (i) The investment returns decline markedly from approximately 20 per cent per annum where the savings period is three years to approximately ten per cent where the savings period is ten years.
- (ii) Given current rates of inflation of about 15 per cent, investors who save for more than four years will receive a negative real return on capital.

In practice, many account holders will obtain somewhat different returns than those presented here. This is because they may have to pay tax of up to 60 per cent of interest earned; or the delay between the final deposit and farm purchase may be greater or less than three months; or different within-year patterns of saving may alter the amount of interest received. However, the returns are unlikely to be more than two percent above or below those shown in Figure 1.

There is an alternative savings strategy that can be used to raise the investment returns above the figures that have been quoted here but at the expense of reduced total savings. This strategy is to open an account well in advance of the proposed farm purchase - if possible ten years before - by depositing \$250 and then making no further deposits until much

FIGURE 1

Investment Returns on Ordinary and Special Farm Ownership Accounts



14.

closer to the proposed purchase date. Then annual deposits of \$5,000 are made in the last few years. This strategy will raise the purchase grant to 50 per cent of accumulated savings.

If this strategy is followed and savings of \$5,000 are made in years eight to ten then the total sum available for farm purchase will be nearly \$24,000 and the investment return will be approximately 27 per cent per annum. If annual deposits are made for five years (that is, years six to ten) then the total sum available will be almost \$40,000 and the investment return will be approximately 19 per cent per annum.

Conversely, there is another savings strategy which will greatly reduce the investment returns. This situation is where savings are made for several years and then no further deposits are made in the remaining years before farm purchase. Although the purchase grant will be increasing as each year goes by, this does not fully compensate for the delay. For example, an account holder who deposited \$250 initially, then \$5,000 for five years, then nothing for the next five years, would end up with nearly \$30,000 at the end of the ten year period which would attract a purchase grant of nearly \$15,000. However, the annual return on the investment would only be about seven per cent per annum.

4.2 Special Farm Ownership Accounts

In calculating the investment returns the following assumptions are made:

- (i) An initial qualifying deposit of \$250 is made on March 31 (that is, on the last day of the tax year).
- (ii) In subsequent years deposits of \$5,000 are made on March 31.
- (iii) Tax rebates are received on June 30. These rebates are then invested on term deposit for nine months for an interest return of eight percent over this period and then invested in the farm ownership account as part of the following year's deposit.
- (iv) No tax is paid on interest received.

It should be noted that after the first \$5,000 deposit, the account holder is, in subsequent years, foregoing less than \$3,000 per annum of cash income. The remainder comes from tax savings and interest.

The percentage returns received from these investments are shown in Figure 1. The major points to emerge are:

- (i) The investment returns can be in excess of 40 per cent per annum in those situations where farm purchase is made after three years in the scheme. However, these returns decline very rapidly as the savings period increases.

- (ii) Unless inflation is below 15 per cent per annum then long term savers who remain in the scheme for ten years will receive a return less than the rate of inflation.

In analysing these returns, it is useful to consider the marginality concept, whereby the additional returns from saving for one more year are compared with the additional sum that is deposited. This analysis indicates that the marginal returns from a four year as compared to a three year savings pattern are less than 15 per cent. By the tenth year the marginal returns have declined to approximately six per cent per annum. Accordingly, this would suggest that savers should try and organise their savings so as to avoid large deposits in the accounts until approximately three years before the envisaged farm purchase and earlier savings should be invested elsewhere.

As with Ordinary Account holders, there will be considerable variation between individuals as to the actual returns received. In particular, those persons who are required to pay tax on interest received will receive returns several per cent lower.

The strategy of making a qualifying deposit about ten years in advance of farm purchase and then waiting several years before making further deposits

will not improve the investment returns. This is in contrast to the situation with Ordinary Accounts. However, it is possible to increase the return on capital invested by making a qualifying deposit of \$250 then waiting two years before making a deposit of \$5,000, then making another \$5,000 deposit one year later, and then purchasing the farm as soon thereafter as possible. The total amount available in the account, together with the final tax rebate, will only be \$12,600 but the return on capital invested is 54 per cent per annum.

5. THE GOAL OF FARM OWNERSHIP

Historically, the price of New Zealand farmland has increased faster than the rate of inflation, although the annual rate of increase in land prices varies considerably from year to year. Valuation Department statistics indicate that between 1965 and 1980 the long term compound rate of increase in land prices was 4.2 per cent per annum greater than the inflation rate.

The minimum cash deposit required for farm purchase tends to increase in proportion to land price increases. On Lands and Survey Department ballot farms this deposit can at present be as low as \$30,000 for a dairy farm and \$50,000 for a sheep farm but only about 80 farmers are settled annually in this way. Most farmers buying a so-called "economic" one man farm on the open market would require a cash deposit of at least \$100,000. Even this would in most cases be less than 30 per cent of the price of land and buildings, with livestock and plant still to be considered.

Consider a scenario where:

- (i) An aspiring farmer deposits \$5,000 per annum in an Ordinary Farm Ownership account.

- (ii) The required cash deposit in current value dollars is \$100,000.
- (iii) Land prices and the required cash deposit increase at the same rate as inflation.

The percentages of the necessary cash deposit that are saved, calculated for savings periods varying from three to ten years and for different rates of inflation, are shown in Figure 2. These results indicate that unless inflation is close to zero then aspiring farmers who save in this way will make little progress thereby towards farm ownership.

It could be argued that this analysis draws an unduly harsh picture in that it may well be that the maximum deposits are raised at the same rate as inflation. This would mean that the real (constant value) limit on savings would remain fixed, but in nominal money dollars the limit would increase. If this were to happen then the percentage of the required farm cash deposit that could be saved through deposits in an Ordinary Farm Ownership Account would be as shown in Figure 3. These figures demonstrate that even in this situation, maximum savings in these accounts cannot be regarded as a prime means of gaining the necessary cash deposit. If land prices continue to increase faster than inflation, then the situation would be even worse than depicted here. It should

FIGURE 2

Percentage of Required Farm Deposit Saved Assuming Annual Deposits of \$5,000
in an Ordinary Farm Ownership Account

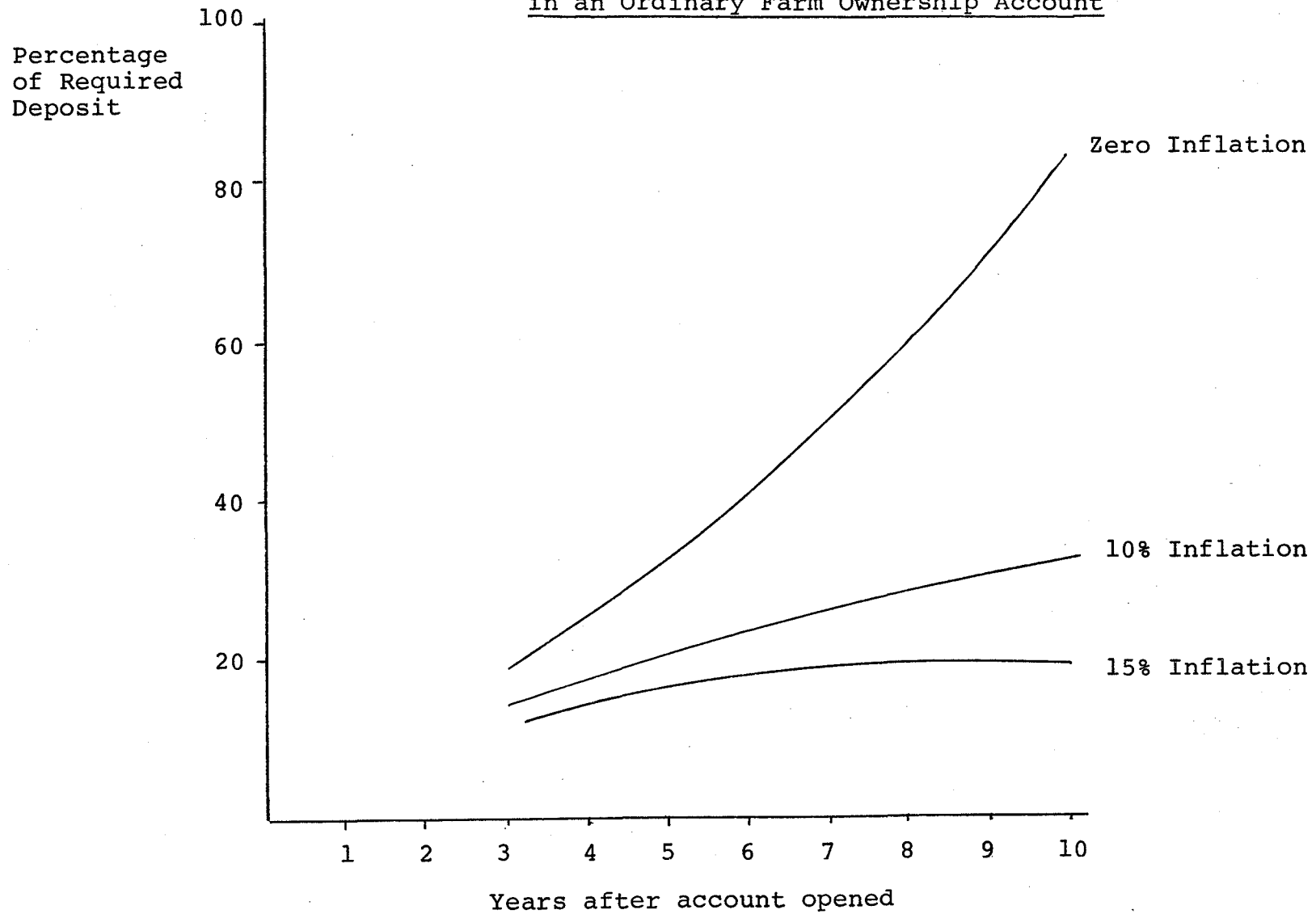
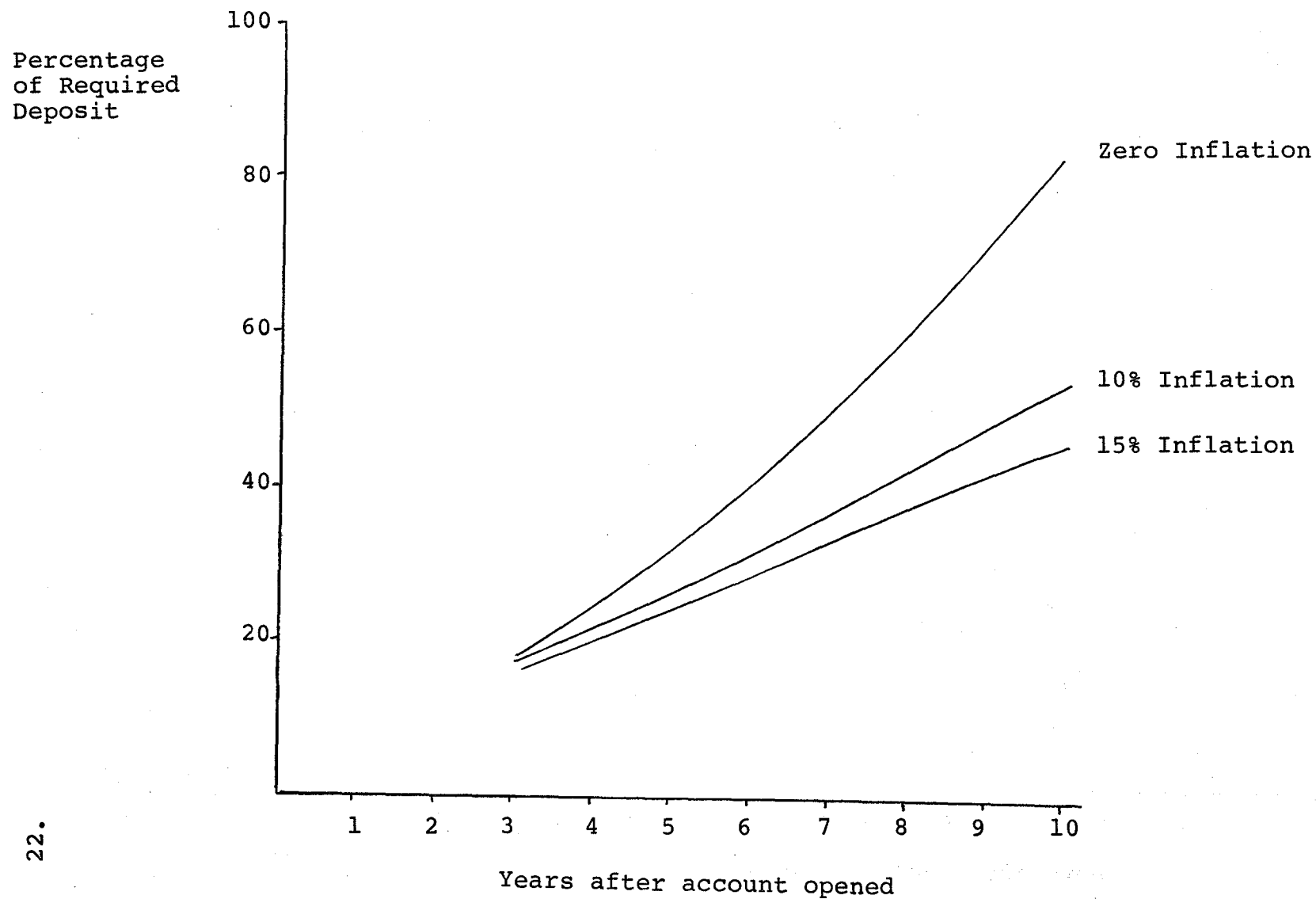


FIGURE 3

Percentage of Required Farm Deposit Saved Assuming Annual Deposits of \$5,000 Initially,
Thereafter Increasing at the Rate of Inflation, in an Ordinary Farm Ownership Account



also be noted that there is no automatic mechanism for raising the savings limit in line with inflation and in the seven-year history of the scheme the limits have been raised only twice.

The results of similar analyses are shown in Figures 4 and 5. The same general conclusions emerge as for the Ordinary Farm Ownership Accounts but it should be noted that the percentage figures are significantly lower in all situations. This is because although the maximum amount that can be held in Ordinary and Special Farm Ownership Accounts is the same for any given period of savings, in the case of Ordinary Accounts the purchase grants must still be added.

FIGURE 4

Percentage of Required Farm Deposit Saved Assuming Annual Deposits of \$5,000 in a
Special Farm Ownership Savings Account

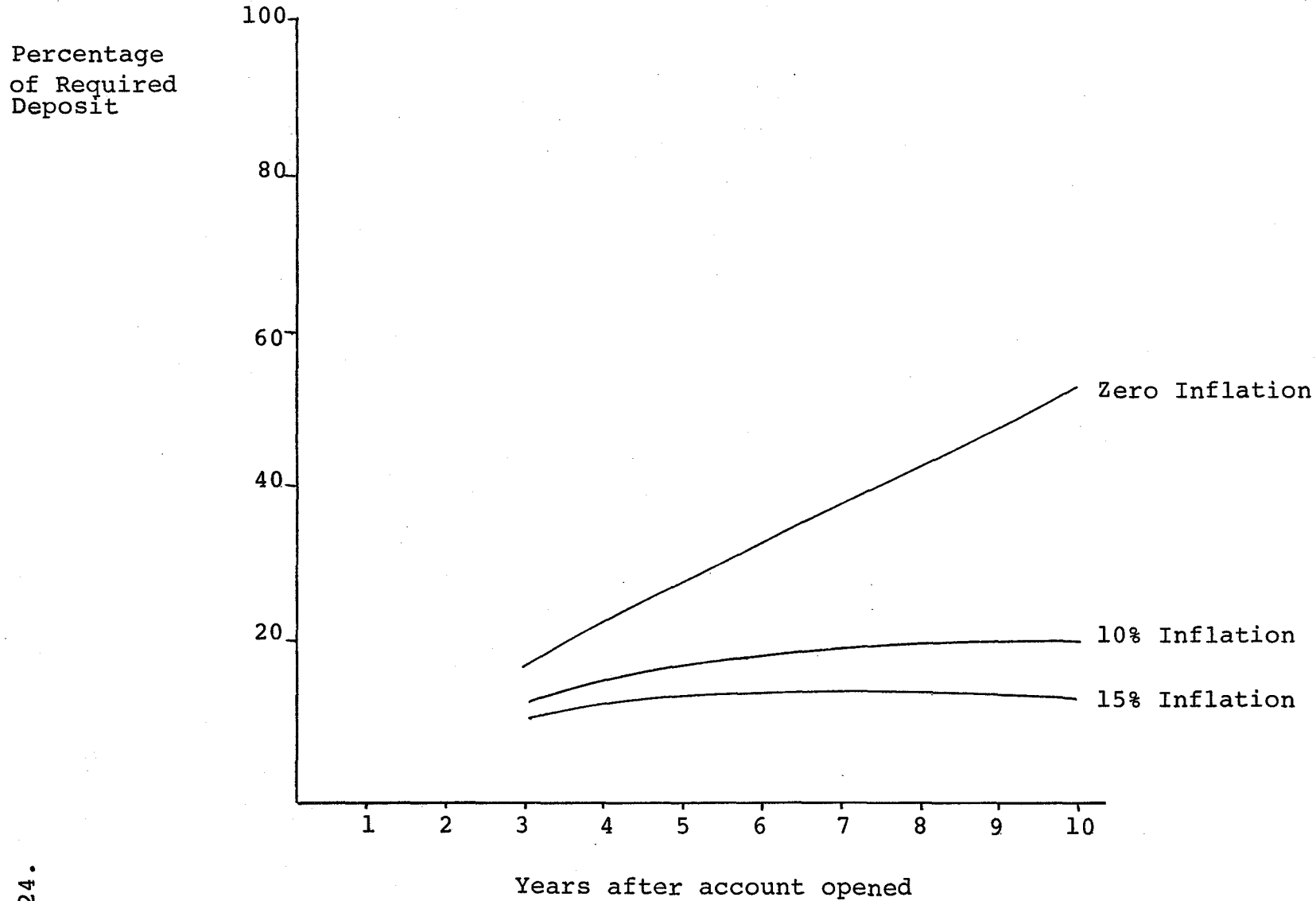
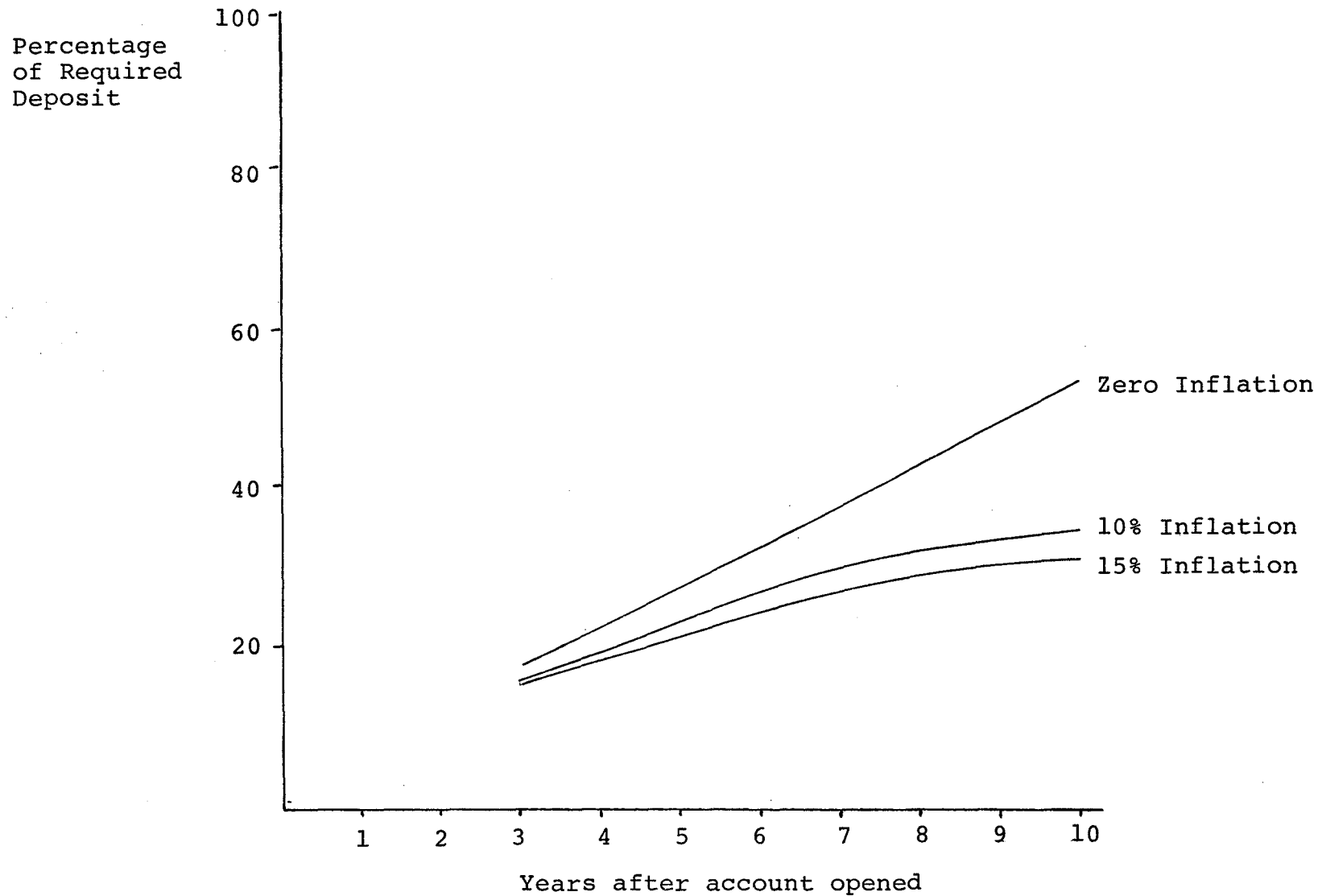


FIGURE 5

Percentage of Required Farm Deposit Saved Assuming Annual Deposits of \$5,000 Initially,
Therefore Increasing at the Rate of Inflation in a Special Farm Ownership Account



6. SAVINGS STRATEGIES FOR ACCOUNT HOLDERS

The analyses presented in Section 4 of this paper indicate that Special Farm Ownership Accounts provide considerably greater investment returns than Ordinary Farm Ownership Accounts. Unless an aspiring farmer is in the unlikely situation of having significant cash savings but is not in a position of having to pay tax then a Special Farm Ownership Account should be the preferred option.

It is also evident that the investment returns from savings deposited in Farm Ownership Accounts are very dependent on the period of savings. Accordingly, intending farmers should aim to place large deposits in these accounts only in the last three to four years before farm purchase or entry into sharefarming. For Special Account holders, the return on capital thus obtained will be in the vicinity of 40 per cent per annum which is well in excess of what could be earned via any other institutional savings scheme.

As a result of these factors, Special Farm Ownership Accounts can be confidently recommended to any aspiring farmer who has access to family wealth and wishes to "top up" those funds with personal savings. Not only will he receive exceptionally high returns on capital but, under existing Rural Bank policy, his Farm Ownership Account will gain him

preferential access to Rural Bank farm purchase funds.

The situation for aspiring farmers without access to cash from family sources is more complex. The analyses in Section 5 indicate that savings in these accounts should not be regarded as a prime means of saving for farm purchase. This is because the effects of inflation are likely to result in land price increases outstripping an aspiring farmer's ability to save the minimum required cash deposit. These people should therefore consider very carefully before depositing funds in these accounts. Most of them, especially those intending to become sheep or cropping farmers, will need to save for farm purchase over many years and if they make deposits in a Farm Ownership Account in the early years, then the return on capital achieved is likely to be less than the inflation rate. These people would be well advised to save elsewhere, for example, in Inflation Adjusted Bonds or possibly company shares. There is also the considerable risk that these people will never achieve farm ownership at all and end up receiving only three per cent interest on capital invested. In times of high inflation this situation can only be regarded as disastrous.

The situation for people who intend to go sharefarming is considerably brighter. These people are quite likely to be able to save the necessary

deposit within three to four years and hence achieve high investment returns. Unfortunately, the opportunities for entry into sharefarming are not well developed outside of the dairy industry.

There is an alternative strategy which can be recommended for aspiring farmers who have little capital. This is to save initially for home ownership by making annual deposits in a Special Home Ownership Account. This scheme offers a parallel set of benefits to first home owners as the farm accounts do for farm ownership. Although the maximum annual deposits in Home Ownership Accounts are at present limited to \$3,000, this is in part compensated for in that the minimum savings period is only two years. The combined effects of the Home Ownership Scheme, the availability of Housing Corporation purchase loans to account holders and the 50 per cent tax rebates on mortgage interest currently available to first home owners, make first home ownership a very attractive method of generating wealth which can be used subsequently as a cash farm deposit. Participation in the Home Ownership Scheme does not preclude the subsequent holding of a Farm Ownership Account. It should also be noted that bona fide farm workers required to live on the farm where they are employed are allowed to let such a house without losing their rights to these benefits.

In summary, the savings strategy that an aspiring farmer should adopt is a function of his or her personal situation. However, in all situations aspiring farmers should aim to avoid making large deposits in Farm Ownership Accounts until they are within three to four years of farm purchase or entry into sharefarming.

7. SUGGESTED ALTERATIONS TO THE SCHEME

It is evident from the analyses presented in this paper that the major problem with Farm Ownership Accounts is that the annual returns on invested capital decline markedly as the savings period increases. There is an associated problem in that the maximum limits on annual savings tend to be eroded away by inflation. This second problem could be easily remedied if there was automatic inflation indexation of the annual savings limit. However, the first problem is more difficult to solve.

Owing to the nature of the Special Farm Ownership Savings Scheme, it would seem infeasible to raise the returns to long term savers. However, there is scope for raising the long term returns received from Ordinary Farm Ownership Accounts. This could be done by further increasing the percentage grants where the savings period is greater than three years. For example, raising the purchase grant to 50 per cent for five year savers and raising it to 160 per cent for ten year savers would in both cases raise the investment return to approximately 20 per cent per annum which is the present investment return for three year savers.

Perhaps the most effective way of achieving the objectives of the Farm Ownership Scheme would be by extending the provisions of the Inflation Adjusted Bonds Scheme. At present the money value of these bonds is adjusted on a quarterly basis according to

the movement in the consumer price index and there is also an annual interest payment of two per cent. However, the current limit of \$20,000 on these bonds limits their effectiveness as a means of saving for farm ownership. Another alternative worth consideration would be a bond scheme indexed to land price increases rather than consumer price index. This would allow long term savers to assess more realistically their annual savings requirements to achieve farm ownership in a given number of years and make farm ownership savings a less risky venture. Although some officials might view such a scheme as being too attractive, it is only by this type of assistance that farm workers without family wealth can realistically aspire to farm ownership outside of the dairy industry. It should also be noted that the annual percentage return on capital invested would still be considerably less than that offered at present to short term savers through the Special Farm Ownership Scheme.

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