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Prunes - Cost of production 0.5.

CASE STUDIES OF PRUNE PRODUCTION

GIANNINI FOUNDATION OF
AGRICULTURAL ECONOMICS

OCT 29 1973

ON THE MURRUMBIDGEE IRRIGATION

AREA AND AT YOUNG

PART I—FINANCIAL RESULTS

S. A. HODGKINSON

Economist

MISCELLANEOUS BULLETIN 13

Division of Marketing and Economics

DEPARTMENT OF AGRICULTURE OF NEW SOUTH WALES

New South Wales Department of Agriculture
Division of Marketing and Economics

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Sydney

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1. INTRODUCTION

The major objective of this study was to assess the relative profitability of prune production in the two areas, the Murrumbidgee Irrigation Area and at Young. Prunes are grown mainly around the town of Griffith which is at the western end of the M.I.A. At Young there are several small settlements some miles from Young such as Kingsvale, Prunevale, Maimuru, Wirrimah, Monteagle and Waterview, where prunes are grown. These settlements are separated by grazing areas.

1.1 ACREAGE AND PRODUCTION

Table 1 sets out total production of prunes for both areas over a number of years.

Table 1

Prune Production: 1949-1968⁽¹⁾

Season		
	M.I.A.	YOUNG
	tons	tons
1949	700	527
1950	560	1,214
1951	776	1,284
1952	309	1,487
1953	1,017	1,638
1954	983	1,730
1955	840	1,068
1956	826	1,388
1957	843	395
1958	1,256	812
1959	1,055	1,521
1960	1,405	1,818
1961	1,322	2,290
1962	1,035	1,786
1963	1,725	2,804
1964	1,386	2,789
1965	2,234	2,193
1966	1,573	1,106
1967	2,644	2,630
1968	1,045	144
TOTAL ACREAGE		
All Varieties	1,483 ⁽²⁾	2,749.5 ⁽³⁾

Sources: (1) N.S.W. Dried Fruits Board Annual Reports.

(2) Irrigation Research Extension Commission
Fruit Tree and Grape Vine Census,
December, 1967.

(3) C.H. Mort, "A Prune Planting Survey at
Young", Agricultural Gazette of
New South Wales, Vol. 79, Part 5
(May, 1968) pp.

The total acreage of prunes on the M.I.A. (both varieties D'Agen and Robe de Sergeant) was 1,483 acres. For Young 2,749.5 acres with 2,595.8 acres actually under prunes. (This latter figure excludes vacant spots in plantings).

It was observed that 61 per cent of M.I.A. prune growers had less than 5 acres of D'Agen variety prunes. Robe de Sergeant amounted to a total 206 acres which would mean on average, less than 1 acre of Robes per farm. The majority of M.I.A. growers do not grow Robe de Sergeant.

At Young only 7 per cent of growers had less than 5 acres of D'Agens. Sixty two per cent had between 5 and 20 acres. Robe de Sergeant trees were more numerous at Young. Out of 112 growers 101 had some Robes planted. Fifty per cent of growers had less than 5 acres of Robes.

1.2 RAINFALL

(a) YOUNG

No rainfall records were available for the individual prune growing districts around Young; Prunevale, Kingsvale, Waterview, Maimuru and Wirimah.

The nearest town where rainfall data is recorded on a regular basis is at the Young Post Office. Wirrimah, for example, is some 18 miles from Young so that variation is likely to occur. Wirrimah is the furthest from Young of the established prune growing districts.

Rainfall data for the Young Post Office recording station is set out in Table 2, extracted from the Bureau of Meteorology Rainfall Statistics (1966).¹

(b) M.I.A.

Again no rainfall records are available for the individual prune growing districts around Griffith. However, in this study all but one of the farms are in the Hanwood area 7 miles approximately from Griffith - the other is at Lake Wyangan 10 miles approximately from Griffith in the opposite direction to Hanwood. In these cases although there may be some variation in rainfall, it is unlikely to be as great as that possible in the Young districts. Rainfall data for Griffith Post Office is set out in Table 2, extracted from the same source as for Young Post Office.

1

Bureau of Meteorology, Rainfall Statistics, Australia,
(Melbourne, 1966).

Table 2

Recorded Rainfall at Griffith and Young

Month	Griffith Rainfall			Young Rainfall		
	Long Period Average 1	Normal Rain- fall 3	Rain- days per month	Long Period 2	Normal Rain- fall 3	Rain- days per month 4
	inch	inch	days	inch	inch	days
January	109	107	4	205	219	5
February	107	126	4	167	196	5
March	138	168	5	201	231	5
April	128	134	6	198	223	7
May	140	136	8	214	230	9
June	163	145	9	282	261	10
July	128	127	11	243	249	11
August	155	133	10	239	250	11
September	123	111	8	209	196	8
October	170	180	8	237	270	9
November	115	114	6	187	214	7
December	127	114	5	200	177	5
TOTAL	1,603	1,595	84	2,582	2,716	92

- (1) Long Period Average, all years (1914-1964).
(2) Long Period Average, all years (1872-1964).
(3) Standard Period Normals of Rainfall 30 years (1931-1960).
(4) Average Number of Raindays per month (1931-1960).

Source: Bureau of Meteorology, Rainfall Statistics Australia, (Melbourne, 1966).

1.3 GENERAL

For those not acquainted with the cultural practices on prune orchards Appendix C set out in table form the cultural practices carried out by each grower on his prune enterprise. A brief description of the practices and the differences between each area follows.

2. DATA SOURCES AND COLLECTION

2.1 METHOD

It was decided that rather than a complete survey case studies would be made of about seven farms in each region. Hence any results physical and financial are not necessarily fully representative of the "average" situation for either area.

2.2 FARM SELECTION

Farms were selected on the basis of prune acreage with some assistance from two Departmental fruit officers at Young and Griffith².

²Messrs. K. Way (Young), P. Gault and J. Mellis (Griffith).

There are case studies for seven orchards at Young and six M.I.A. orchards. A seventh grower on the M.I.A. was interviewed but was found to be completely atypical of M.I.A. horticultural farms and therefore deleted.

2.3 PHYSICAL DATA

Each grower was asked to provide information on the physical characteristics of his farm such as acreage, enterprises, fruit type, etc.

Physical details of farm size and acreage were checked against the I.R.E.C.³ Horticultural Farm Inventory for M.I.A. orchards, and the prune tree health survey of young orchards.⁴

A detailed record of the cultural programme undertaken on prunes was collected from each grower. Growers were asked about cultivation and pruning practices, labour costs for pruning and harvesting, amount and type of fertilizers and sprays applied. This information has been used in the preparation of gross margins.⁵

2.4 FINANCIAL DATA

Production and financial information for 3 years was obtained. In most cases data was collected for the financial years 1965/66, 1966/67 and 1967/68, (i.e. Prune Pools 66, 67 and 68). However, since income tax returns were the major source of information on expenditure and returns, some farms have the year 1964/65 rather than 1967/68 as their returns for 1967/68 were unavailable.

On two farms, one on the M.I.A. and one at Young, neither 1967/68 nor 1964/65 was readily available so that only two years financial results are presented. Appendix A sets out in detail for each farm cash expenditure and returns for three years under consideration.

Permission was sought from each grower to inspect his income tax records and returns. These provided the most complete source of data available on cash expenditure and returns. The use of income tax returns as a source of financial data can give problems, particularly concerning accuracy of data. However, where no other reasonably accurate records are available, then tax returns and the profit and loss statement are the only alternative, particularly for statements of expenditure and income.

2.5 DEPRECIATION

At the interview a machinery inventory was taken of at least the major items of equipment. This was done to assess depreciation and total farm investment.

³Irrigation Research and Extension Committee.

⁴Department of Agriculture Mid Western Region.

⁵S.A. Hodgkinson, Case Studies of Prune Production on the Murrumbidgee Irrigation Area and at Young, Part II - Gross Margins (Division of Marketing and Agricultural Economics, Miscellaneous Bulletin No. 14, November, 1970).

(1) Machinery

Although income tax returns were used as a record for general farm expense items, the depreciation on plant and equipment as recorded for tax purposes was not used. Tax depreciation rates do not generally reflect the true life of the implement.

In compiling the machinery inventory, the farmer was asked to assess its present clearing sale value. In an attempt to avoid over valuation, particularly of older plant, growers were requested to give a price estimate not of what they would sell at (i.e. items value to them) but the price at which they thought others would purchase.

Depreciation was calculated on their value for items concerned at the following rates:-

Tractors)	
Dehydrators)	
Orchard Sprayers)	17 per cent
Pruning Platforms)	
Balers)	
Other implements)	
(Cultivation)	10 per cent
Equipment etc.))	
Fruit Case Presses)	
Staplers)	
Fruit Graders)	5 per cent
Stationary Engines)	
Prune Boxes, etc.)	
Structures)	3 per cent

The values obtained of these items were used to calculate the investment in plant and equipment for inclusion in total farm capital investment.

(2) Structures

It is debatable as to whether structures (buildings) should be depreciated on the M.I.A. when in fact farms continue to appreciate. However as this does not appear to be the case in the Young area structures in both areas have been depreciated for conformity.

On the M.I.A. it may be that the land with its potential for horticultural production appreciates rather than the structures (Improvements) placed upon it.

(3) Orchard Plantings

Fruit tree plantings depreciate over time. It is difficult to assess a monetary value for orchard depreciation when the productive potential of a tree can be greatly influenced by its management, apart from factors such as age, tree health, etc.

No depreciation on orchard plantings has been included for either area. Degree and rate of depreciation of trees is likely to be reflected in production.

(4) Fencing

No allowance for depreciation of fencing in either area was made. Many growers in the M.I.A. have removed their fences entirely over the past few years.

Depreciation on fences for Young area farms was also excluded. The fences in question are not of a high standard nor on most farms are large amounts involved. Exclusion of depreciation on these items will make very little material difference to the results observed. Depreciation on fences is generally charged at 3 per cent per annum and since the present day value of these fences is low, it would not amount to a very great sum.

2.6 PROPERTY VALUATIONS

The Valuer General's Department at Young provided valuations of farms in the Young district. These farms were valued in 1967 but the valuations were up-dated by the Valuer General to 1968 values. The values represent the Improved Capital Values on a freehold basis. (These farms are held under various leases from the Crown and many farmers have not converted.)

Property valuations for the M.I.A. are based on valuations done for rating purposes in 1964. These are of course somewhat out of date, but it is considered that values may have doubled or risen by half as much as the original 1964 improved capital valuation based on sales of comparable properties in the area.

The Rural Bank Valuer at Griffith¹ considers that the general rise in values is of the order of 40 per cent for the larger farms. Values of smaller farms have risen further due to the nature of the market for horticultural farms in the area. (That is a strong demand amongst migrant farmers with small capital resources for farms.)

¹ R. Stannard, Rural Bank, Griffith - personal communication.

Table 3

M.I.A. Orchard Acreages

Farm	Total Acreage	Variety		Other Fruit	Balance
		D'Agen	Robes		
A	49	16.66 5.55 NB	25 trees	Navels 1.1 Valencias 4 Peaches 3 Plums 4.4 Grapes 7	Headlands, etc.
B	61	6.36 3.33 NB	Nil	Peaches 9.52 Apricots 5.21 Apples 5.22 Plums 2.24 Pears 5.64 Balance grapes	Approx. 5 acs. head- lands buildings etc.
C (a) (b)	77	12 4 NB	Nil	Peaches 7 Grapes 25 " 8 NB	Balance unplanted, etc.
D (c) (d)	46		4	Valencias 10 Navels 16 Apricots 2 Apples 5 NB Peaches 1 Grapes 1	7 acres lost in buildings, etc.
E	70	15.95	Nil	Grapes 17.5 Oranges 4.4 Apples 5.78	5 acres lost in headlands buildings etc. Balance being pre- pared for wine grapes.
F (e)	100	9.83 32.83 NB	3.92	Plums 3.78 Apricots 2.88NB Vines 17 Peaches 24.30	Balance lost in buildings, headlands, etc.

Notes:

- (a) Farm C is two farms; one of 26 acres and one of 51 acres.
 (b) In some cases plantings are down to 80/acre on this farm instead of more usual 90/acre (22' x 22').
 (c) Farm D has Robes and D'Agen interplanted on half and half basis.
 (d) Farm D leases 10 acres for vegetable production.
 (e) Farm F has 2 farms also - amalgamated for this study.

NB means non bearing.

Table 4
Young Orchard Acreages

Farm	Total Acreage	Variety		Other Fruit	Balance
		D'Agen	Robes		
R (a)	100	15	5	Nil	8 acres lucerne 27 acres oats Balance grazing
S (b)	212	43 10 NB	7	Nil	159 acres gra- zing and some crop
T	141	31.75 5 NB	2.25	Cherries 9 Nectarines 3	Balance 90 acres grazing
W	137	21.03	1.42	Peaches 10 Pears 3 Plums 4 Apples 18.5 Cherries 42	Balance 37 acres grazing
X	100	36 4 NB	4.86	Nectarines 1.25 Peaches 4.25 Plums 3 Pears 3 Cherries 7 NB	Balance 29.64 acres grazing and 3.00 build- etc.
Y	100	22	Nil	Peaches } Nectarines } 10 Plums 3 Peaches 5 NB Apples } Pears } 10	Balance 50 acres grazing
Z	144	39	9	Nil	Balance 96 acres grazing

Notes:

(a) Farm R has another property of 486 acres grazing elsewhere in the Young area.

(b) Farm S has two farms, which have been amalgamated for this study.

NB - means non bearing.

2.7 PRUNE PRODUCTION AND YIELDS

Prune yields (dry tons) for the growers in both areas for the years 1965/66, 1966/67 and 1967/68 are set out in Table 5 and Table 6. In some cases a fourth year has been added - 1964/65.

Table 5
Prune Yields Dry Weight*
M.I.A. Farms

FARM	1964/65		1965/66		1966/67		1967/68		AVERAGE 3 YEARS		AVERAGE 4 YEARS	
	TOTAL YIELD	YIELD PER BEARING AC.	TOTAL YIELD	YIELD PER BEARING AC.	TOTAL YIELD	YIELD PER BEARING AC.	TOTAL YIELD	YIELD PER BEARING AC.	TOTAL YIELD	YIELD PER BEARING AC.	TOTAL YIELD	YIELD PER BEARING AC.
FARM "A" D'AGEN } ROBES }	41.172	2.471	42.623	2.558	41.763	2.506	23.000	1.380	35.795	2.148	37.140	2.229
FARM "B" D'AGEN	6.650	1.046	13.320	2.094	22.221	3.493	7.624	1.198	14.388	2.262	12.454	1.958
FARM "C" D'AGEN	52.000	4.333	37.500	3.125	55.000	4.583	14.000	1.166	35.500	2.958	39.625	3.302
FARM "D" D'AGEN } ROBES }			14.000	3.500	18.000	4.500	9.000	2.250	13.666	3.416		
FARM "E" D'AGEN			26.000	1.630	43.500	2.727	15.000	0.940	28.166	1.765		
FARM "F" D'AGEN	21.416	2.178	11.860	1.206	28.707	2.920	8.250	0.839	16.272	1.655	17.558	1.786
ROBES	13.580	3.463	4.068	1.037	12.781	3.260	5.307	1.354	7.386	1.884	8.934	2.279
BOTH VARIETIES	34.996	2.545	15.929	1.158	41.489	3.017	13.557	0.985	23.658	1.720	26.492	1.926

+ In Tons or Decimals Thereof.

* Both varieties for farm A but principally D'Agen.

Table 6
Prune Yields Dry Weight⁺
Young Farms

FARM	1964/65		1965/66		1966/67		1967/68		AVERAGE 3 YEARS		AVERAGE 4 YEARS	
	TOTAL YIELD	YIELD PER BEARING AC.	TOTAL YIELD	YIELD PER BEARING AC.	TOTAL YIELD	YIELD PER BEARING AC.	TOTAL YIELD	YIELD PER BEARING AC.	TOTAL YIELD	YIELD PER BEARING AC.	TOTAL YIELD	YIELD PER BEARING AC.
<u>FARM "R"</u> D'AGEN } ROBES }	21.750	1.087	6.500	0.325	30.250	1.512	0.333	0.016	12.360	0.618	14.708	0.735
<u>FARM "S"</u> D'AGEN ROBES BOTH VARIETIES			19.764 4.104	0.459 0.586	64.481 6.130	1.499 0.875	4.250 0.300	0.098 0.042	29.498 3.511	0.686 0.501		
	27.500	0.550	23.868	0.477	70.612	1.412	4.550	0.091	33.009	0.660	31.632	0.632
<u>FARM "T"</u> D'AGEN } ROBES }	15.000	0.441	5.000	0.147	22.000	0.647	0.500	0.014	9.166	0.269	10.625	0.312
<u>FARM "W"</u> D'AGEN ROBES BOTH VARIETIES	20.626 4.704	0.980 3.312	15.103 2.831	0.718 1.993	18.126 3.572	0.861 2.515			*17.951 * 3.710	0.853 2.612		
	25.330	1.126	17.934	0.798	21.699	0.966	3.000	0.133	14.211	0.633	16.996	0.757
<u>FARM "X"</u> D'AGEN ROBES BOTH VARIETIES			17.524 3.251	0.486 0.669	48.816 5.516	1.355 1.135	2.619 1.458	0.073 0.300	22.986 3.408	0.638 0.701		
			20.775	0.506	54.332	1.329	4.078	0.090	26.395	0.643		
<u>FARM "Y"</u> D'AGEN			24.500	1.113	22.500	1.023	2.500	0.114	16.500	0.750		
<u>FARM "Z"</u> D'AGEN ROBES BOTH VARIETIES			22.666 5.196	0.581 0.577	34.034 5.008	0.872 0.556	3.445 0.503	0.088 0.055	20.048 3.569	0.514 0.396		
			27.862	0.580	39.043	0.813	3.949	0.082	23.618	0.492		

+ In Tons or Decimals Thereof.

* Average over 3 years excluding 1967/68.

This applies only to farm "W" as D'Agen and Robes for 1967/68 not split up.

Total production (dry) and yield (dry) per bearing acre of the two varieties D'Agen and Robe de Sergeant are presented as well as production and yield per acre of all prunes. A straight average has been calculated for the 3 years for each farm. A 4-year average is presented as well where data was available.

2.8 SEASONAL CONDITIONS AND PRODUCTION

At Young, several growers were affected by hail in 1966/67 and frost in 1965/66. The effects varied as the farms selected were in different parts of the district. In the M.I.A. all except one farm were in a fairly compact area.

The 1967/68 season was affected by drought in both areas though considerably more in the Young area.

It should be noted that prunes are produced under irrigation on the M.I.A. At Young irrigation is rare. One farmer at Young in the group is attempting to irrigate prunes by watering from a dam, however he can only irrigate a small acreage.

3. ANALYSIS OF FINANCIAL DATA

3.1 CASH EXPENSES

Appendix A sets out in detail the expenses for each farm over the years under consideration with a 3-year or 2-year average where applicable.

3.1.1 CAPITAL EXPENDITURE

Capital expenditure made over the 3 years is included as a separate item. This is not included in total cash operating costs to derive net cash income. Since all of the capital expenditure is either machinery or structures, it becomes part of the farm capital investment and is subject to depreciation for which allowance has been made.

3.1.2 CASH OPERATING EXPENSES

The record source for this data was the profit and loss statement and/or the actual income tax return.

The Cash Operating Expenses are derived into two sections.

- (i) Overhead or Fixed Costs (Expenses)
- (ii) Direct or Variable Costs (Expenses).

The allocation of expenses to either category was made on the following basis.

3.1.3 OVERHEAD COSTS

These costs are those associated with the ownership of the farm such as rent, rates and insurance. Included also were interest payments made to various credit institutions, most commonly banks. Although a cost that can vary with production in terms of any one year's expenses, it is one that must be met within that year.

3.1.4 REPAIRS AND MAINTENANCE TO PLANT

Repairs and maintenance to plant can also be viewed as a variable or direct cost. It can vary with use given to a particular item. However, since the records available did not state on what type of equipment the repairs were made and in some cases repairs and maintenance to improvements were included, it was decided to view it as an overhead expense. Also it is maintenance of capital assets subject to depreciation.

3.1.5 DIRECT OR VARIABLE COSTS

Direct Costs are those that are directly attributable to the production of a crop or livestock product. These costs will vary with year to year production levels.

3.1.6 DEHYDRATION COSTS

Where growers patronize co-operative driers their prune returns are shown net of dehydration charges.

Where on-farm dehydration is used, fuel and electricity will appear in those categories. Any employed labour will appear in wages.

3.1.7 TOTAL CASH OPERATING COSTS

These two categories - overhead and direct cash costs - give total cash operating costs. To obtain total operating costs as distinct from cash operating costs the essentially non-cash cost of depreciation should be added to cash overheads and direct cash costs.

3.2 GROSS INCOME

Gross Income covers the whole farm gross income including returns from farm enterprises other than prunes. On the M.I.A. these included canning fruits, citrus and wine grapes, and at Young, cherries, apples, and sales of livestock and wool.

Where co-operative dehydration is used in both areas, prune returns are net of these dehydration charges and certain levies. Sales of livestock are net of commission.

3.2.1 CONTRACT INCOME

Contract income includes contract dehydration and other farm operations for which growers may do on a contract basis for friends or neighbours.

3.2.2 OFF-FARM INCOME

Off-farm income includes Directors' Fees and income from off-farm investments of various kinds. The value of these farm investments is included in total capital investment, since the income from them is used to finance farm operations.

3.2.3 PRUNE INCOME

Prunes are sold on a pool system. Growers are paid an equalized price between prunes sold on the home market and those exported.

3.3 THE POOL SYSTEM

Up until 1970, only one prune pool has operated covering all prunes. From 1970 onwards a separate pool will operate for the disposal of prunes of the Robe de Sergeant variety. In fact separate pools will be created; one for the D'Agen variety and one for Robe de Sergeant. Robe prunes are generally the least favoured variety for sale purposes because of processing problems. Most of the Robe production finds its way onto the lower priced export market.

The growers are paid on a grade basis, the grade depending on fruit size; i.e. number of prunes per pound. They are paid a "First advance" depending on the weight they have in each fruit grade. This first advance is made in the crop year after harvest and dehydration have been completed and fruit received into the pool. With the Co-operatives, this first advance is financed by borrowings from the Reserve Bank. Further payments are spread over several years as payments for fruit sold are received.

Private Buyer/Sellers are also part of the pool system. They pay a first advance and remit further payments to growers. They are required to export a certain percentage of their crop purchase.

Income from prunes includes all advances received by the grower for the sale of prunes whether from one of the Co-operatives or a private buyer regardless of the crop year involved.

The final value of a particular prune crop (pool) to the grower is not determined until all payments are received from prune sales. Finalization of a pool may be two to three years after the actual crop year.

These subsequent payments which may be flowing from two or three pools at any one time, contribute to the cash flow position of growers and financing of subsequent production.

3.4 PROPORTION OF TOTAL GROSS INCOME FROM VARIOUS ENTERPRISES

The proportion of total gross income contributed by the prune growing enterprise is shown in two ways:

(i) As a percentage of total fruit income. This is done particularly for the M.I.A. where there are several fruit enterprises on most farms.

(ii) As a percentage of total gross farm income. The taxation records for some farms showed income from fruit as a total sum, with no breakdown as to the contribution to income from the individual fruit enterprises. This was particularly so for the M.I.A. farms.

Total gross incomes on all farms included prune returns. However only on some farms were prune returns dissected out from total fruit incomes.

Hence the proportion of total fruit income and total gross farm income contributed by prunes can only be assessed accurately for those farms with prune returns shown separately.

For the other growers as no dissection was available, estimates have been made of the proportion of gross income contributed by prunes. These estimates are based on growers prunes production (dry tons) times the average pool prices for the respective pools. These final average prices are those paid by Griffith Producers Co-operative Ltd. (for M.I.A. farms) and Young District Producers Co-operative Ltd. for Young farms, for respective pools.

Some of the growers for whom these estimates are shown do not sell to the co-operative, patronizing private buyers instead. Others sell to both co-operatives and private buyers. It has been necessary to use co-operative prices here.

It has not been possible to estimate deferred payments flowing from previous pools and their contribution to the gross prune returns of each year. Where a pool has been finalized - 66 Pool, 67 Pool - the final average payment per ton to growers is used. This is an average of all grades of fruit so that it does not take account of a grower's grade - weight situation for a particular crop. For the 68 Pool, the average payments per ton made up to June - July, 1969 were used. The limitations associated with these estimates mean that they can only give an indication of the contribution made by prunes to gross farm income on a particular farm. Estimates of contribution by prunes to gross farm income are for farms: A; C; D; E; F; W; and Y. All other farms have actual figures.

Using the actual figures and the estimates:

(i) Contribution of Prunes to total fruit income

Table 7 summarises this data for farms in both areas.

TABLE 7

Prunes Percentage Contribution to Total Fruit Income

FARM	1964/ 1965	1965/ 1966	1966/ 1967	1967/ 1968	3 YEAR AVERAGE
			M.I.A.		
A (E)		67.76	72.79	53.47	65.87
B		26.09	20.52	21.00	22.35
C (E)		38.84	61.83		49.60*
D (E)		30.32	43.79	15.43	28.31
E (E)		62.66	62.47		
F (E)		22.09	46.59	16.29	29.37
			YOUNG		
R		No Other Fruit Income			
S		No Other Fruit Income			
T	98.87	97.47	89.85		95.48
W (E)	25.66	24.14	43.12		29.53
X	60.41	77.43	62.24		66.40
Y (E)		48.53	46.69	12.48	41.30
Z		No Other Fruit Income			

* = 2 Year Average.

(E) = These are the farms for which estimates of per cent contribution to gross farm income by prunes have been made.

Young: Farm S, R and Z have no other fruit income. On farm T income from other fruit is, as yet, of little significance, but production of other fruit will increase in the future particularly from the 9 acres of cherries.

M.I.A.: Although there are variations amongst individual farms and between years on particular farms, prunes contribute proportionately less to fruit income on the M.I.A. farms than at Young.

(ii) CONTRIBUTION TO TOTAL GROSS FARM INCOME

This section is of more significance than Section (i) since it indicates the importance of prunes to the whole farm. Table 8 summarises this data for farms in both areas.

Table 8

Prunes Percentage Contribution to Gross Farm Income

FARM	1964/ 1965	1965/ 1966	1966/ 1967	1967/ 1968	3 YEAR AVERAGE
		M.I.A.			
A (E)		60.75	63.88	45.07	57.69
B		24.10	19.63	19.51	20.85
C (E)		35.71	53.31		44.24*
D (E)		30.16	43.78	15.38	28.23
E (E)		62.66	62.47		
F (E)		22.09	46.44	16.25	29.32
		YOUNG			
R		48.47	77.46		60.02 ⁴
S		98.00	72.66	77.94	82.49
T	66.82	74.75	72.55		70.25
W (E)	24.88	23.73	42.34		29.09
X	59.79	75.30	60.38		64.91
Y (E)		46.24	46.69	12.36	40.44
Z		77.05	74.69	62.88	72.99

* = 2 Year Average.

(E) = These are the farms for which estimates of per cent contribution to gross farm income by prunes have been made.

Young: Although variations exist amongst farms and from year to year on each farm, prunes on most farms are the most important source of gross farm income. The lower percentage contribution by prunes to gross farm income in 1967/68 reflects the generally poor seasonal and crop conditions experienced in this area. Where such a high proportion of gross farm income is contributed by prunes, gross incomes and ultimately overall farm performance can suffer should seasonal conditions be adverse and/or product price decline. The dryland conditions under which these farms operate can cause wide fluctuations in production from year to year which in turn produce similar fluctuations in income.

Prune prices decline when there is a large crop and a large proportion has to be exported. Prices tend to rise when there is a generally small crop, the major part of which goes onto the more highly priced home market.

For the individual grower at Young a small crop at Young means the individual does not have the tonnage to receive the advantage of the higher prices.

M.I.A.: Again variations are evident between farms and from year to year. Irrigation on the M.I.A. does reduce the effects of dry seasonal conditions and helps to reduce fluctuations in production that might be attributed to lack of water.

In Table 9 and Table 10 the proportion of the total farm acreage under prunes, (split into bearing and non-bearing as a percentage of total farm acreage) is set against the percentage contribution made by prunes to gross farm income.

Table 9

Proportion of Farm Acreage under Prunes and Percentage Contribution to Gross Farm Income - M.I.A.

Farm	Proportion of farm Acreage Under Prunes			Percentage Contribution To Gross Farm Income			
	Non Bearing %	Bearing %	Total Prune Acreage	1965/ 1966 %	1966/ 1967 %	1967/ 1968 %	Three Year Average %
A	11.32	34.00	45.32	60.53	63.88	45.07	57.61E
B	5.45	10.43	15.88	24.10	19.63	19.51	20.85
C	5.19	15.58	20.77	35.71	53.31		44.24*E
D	-	8.69	8.69	30.16	43.78	15.38	28.23 E
E	-	22.78	22.78	62.66	62.47		E
F	32.83	13.75	46.58	22.09	46.44	16.25	29.32 E

E = Estimates of Contribution to Gross Farm Income Made by Prunes.

* = 2-Year Average.

Table 10

Proportion of Farm Acreage Under Prunes (all varieties) and Percentage Contribution to Gross Farm Income - Young.

Farm	Proportion of farm Acreage Under Prunes			Percentage Contribution To Gross Farm Income				
	Non Bearing %	Bearing %	Total Prune Acreage	1964/ 1965 %	1965/ 1966 %	1966/ 1967 %	1967/ 1968 %	Three Year Average %
R	-	20%	20%		48.47	77.46		60.02*
S	4.72	23.58	28.30		98.00	72.66	77.94	82.49
T	3.54	24.11	27.65	66.82	74.75	72.55		70.25
W	-	16.38	16.38	24.88E	23.73E	42.34E		29.09E
X	4.00	40.86	44.86	59.79	75.30	60.38		64.91
Y	-	22%	22%		46.24E	46.69E	12.36E	40.44E
Z	-	33.33%	33.33%		77.05	74.69	62.88	72.99

E = Estimates of Contribution to gross farm income made by prunes.

* = 2 Year Average.

At Young on farm S, 28.30 per cent of total farm acreage is under prunes (23.58 per cent as bearing prunes, 4.72 per cent as non-bearing prunes). Over 3 years prunes have contributed an average of 82.49 per cent of the gross farm income.

Production and income from prunes on Farm F can be reasonably expected to increase in the future when the non-bearing acreage reaches bearing age.

3.5 NET CASH INCOME

Net cash income is the balance left after deducting the year's Cash Operating Costs from Gross Farm Income. It is shown for each farm in Appendix A.

To determine whether a farm has a cash deficit or surplus at the end of a particular year, Capital Expenditure is added to Total Cash Operating Costs to give Total Cash Outlay which is deducted from Gross Income leaving a final Cash Balance for the year. The size of Cash Balances varied between farms and between years but no farm had a cash deficit at the end of any year.

3.6 NET DISPOSABLE INCOME

Net Disposable Income is the difference between total gross farm income and total farm costs (both cash and non-cash costs, such as depreciation). It is the amount available each year to the farmer to provide for his family living expenses, taxation, savings, and further farm investment.

Net Disposable Income figures for each farm are set out in Appendix B which contains details of return to capital and management. Net Disposable Income varied considerably in size, being much higher on M.I.A. farms than on farms at Young.

The range in Net Disposable Incomes at Young apart from farm T (one year negative) was between \$200 and \$9,250, a much wider range than evident on the M.I.A.

There were no negative Net Disposable Incomes on M.I.A. farms. Lowest for any year was Farm B in 1965/66 with \$2,587. Two farms A and C had Net Disposable Incomes in excess of \$11,000 each year. The remainder (except Farm B) ranged between \$3,000 and \$9,500 per annum.

Farm T total prune production in 1967/68 was 0.500 tons and prunes over the previous three years contributed an average 70.25 per cent of total gross farm income. The fact that Farm T had a negative Net Disposable Income indicates that family living expenses, further investment, etc., was financed from an external credit source or perhaps an off-farm income producing source separate from the farm business.

Other farms at Young had significantly lower Net Disposable Incomes in 1967/68 to other years, due mostly to the poor prune crop.

Farm X had the highest Net Disposable Income for all farms at Young. However there are no 1967/68 results for this farm; and the poor prune crop would have affected results. Prunes on this farm contributed an average of 64.91 per cent to Total Gross Farm Income over the three years' results presented.

3.7 NET FARM INCOME

Net Farm Income measures the return to the labour and management of the owner and his family and to the total capital investment required to earn it. To obtain Net Farm Income the rent and interest actually paid by the grower must be added to Net Disposable Income. This is because Net Farm Income is a residual measure of the surplus available after paying all other farm costs. Rent and interest are both payments made for the use of external capital. When compiling Net Farm Income we want to measure the amount available after all other costs are paid out of income, to provide a return on total capital (regardless of who owns it) plus the owner/operator's and family labour and management.

In other words, all farms are converted to a freehold basis to compare performance. If this is not done (i.e. rent and interest are not added to net disposable farm income) leasehold farms and those with large interest payments would appear to be operating inefficiently compared to freehold unencumbered farms, whereas in fact they may be run more efficiently in terms of return to total capital employed in the venture (regardless of whether the farmer owes the money to banks etc. or pays rent).¹

Appendix B sets out for each farm the Net Farm Income for each year and an average for the years presented.

On the M.I.A., farms A and C have the highest Net Farm Incomes, and on no farm was Net Farm Income below \$3,000, although Farm B was only just above \$3,000 in 1965/66 and Farm D with \$3,595 in 1966/67.

An average Net Farm Income cannot be given for the group as a whole because of different years results for some farms. However, for the individual year's and the 3-year averages for each farm, apart from farms A and C, had Net Farm Incomes in excess of \$11,000 per annum (range \$18,000 to \$11,000).

The range in Net Farm Incomes at Young on farms apart from farm T, was from \$800 to \$9,250 over the several years.

Even with rent and interest added back into Net Disposable Income for the purposes explained earlier, Net Farm Income for Farm T remained negative. As with Net Disposable Income, there was a wide range in the size of Net Farm Incomes at Young. A significant drop occurred in net farm incomes in 1967/68. Where data is not presented for 1967/68 for farms R, T, W and X a decline in Net Farm Income is indicated mostly because of the poor prune crop in 1967/68 which contributes on most farms (apart from perhaps farm W) a large proportion of Gross Farm Income. Costs such as harvesting, dehydration and perhaps some crop expenses may well have been lower with the lowered production but Net Farm Income would still have been affected.

Farm X again had the highest Net Farm Income in all years. However 1967/68 results were not available but Net Farm Income would have been lowered with reduced prune production in that year.

¹J.G. Ryan, Financial Results of a Sample Survey of Rice Farms in the Murrumbidgee Irrigation Area, (Division of Marketing and Agricultural Economics, Miscellaneous Bulletin No. 3, June, 1968).

3.8 OWNER/OPERATOR'S LABOUR ALLOWANCE

An allowance of \$3,000 was made for the owner/operator's labour. Where other unpaid family labour was used on the farm, an allowance was made for this and was added to the owner/operator's allowance. Owner/operator's labour allowance and allowance for unpaid family labour was deducted from Net Farm Income to ascertain the Net Return to Management and total capital investment in the farm.

Farms C and D had two full time owner/operator's so that a \$3,000 labour allowance is made for each one.

3.9 RETURN TO CAPITAL AND MANAGEMENT

After the owner/operator's labour allowance was deducted from Net Farm Income, a net dollar Return to Capital and Management was obtained. A percentage return on Average Total Capital Investment was then determined.

3.10 AVERAGE TOTAL CAPITAL INVESTMENT

Average Total Capital Investment includes the improved capital value of the land, buildings (excluding owner/operator's dwelling), fences, orchard, watering facilities, and any other improvements of a capital nature.

Reference to the section of this report on property valuations gives the source of valuations used (Valuer General's Department) and adjustments made to the valuations to up date them.

To the value (or investment) in land, buildings and associated items, was added the value of plant and equipment owned. Reference to the section on machinery depreciation shows how the value of plant and equipment was obtained.

In some cases farmers had off-farm investments, the income from which was directed to farm funds to finance various items. The present value of these assets, either property or stocks and shares, etc., was added to the Average Total Capital Investment.

At Young, livestock were carried in addition to orchard production activities. The numbers of stock varied from farm to farm. In some cases only a few head of beef cattle were involved, whereas on others larger numbers of sheep were carried.

These stock were valued at an average of sale and purchase prices over a year, obtained from taxation livestock trading accounts. Book valuations of stock on hand as are normally used in taxation stock trading accounts were not used for these valuations as they are unrealistic.

On some farms there were two houses on the property. One was excluded from average total capital investment - that of the owner/operator. The other was assumed to be the dwelling of an employee (whether lived in or not) and therefore representing an investment associated with production on the farm and as such was included.

Investment in land, buildings and orchard did not alter much over the three year period. Valuations were up-dated as explained earlier. Any major additions that had been made since the original valuation were added. However these were very few. Investment in plant and equipment also did not alter very much as there were no major disposals or additions over the three period on the majority of farms.

The demand for horticultural land on the M.I.A. is such that values have been forced up, particularly for smaller farms. However, larger farms have increased in value also.

Stock numbers on farms at Young remained about the same over the three years on most farms. Some growers may have sold off some during 1967/68. The average number of stock carried over the three years involved on each farm is the basis of the stock valuation.

3.11 PERCENTAGE RETURN TO CAPITAL AND MANAGEMENT

The range in Return to Capital and Management results for farms at Young was between + 15.61 per cent and - 7.69 per cent for individual years. The effect of the 1967/68 prune crop was evident in several growers results. For farms where no 1967/68 results are available a similar effect is indicated.

Farm X had the highest percentage Return to Capital and Management over the three years, although some drift downwards in the size of this return is evident over the three years. If available, 1967/68 results would probably have shown a further decline due mostly to low prune production in that year.

These results however are well above the prevailing bond interest rate of 6 per cent per annum.

Farm Y and Z at Young for 1965/66 and 1966/67 have Return to Capital and Management results above the bond interest rate of 6 per cent per annum. However, 1967/68 results lower the average considerably. Farm S suffered a similar reversal in Return to Capital and Management in 1967/68 and 1965/66 results were below 5 per cent. Where one crop in this case prunes, contributes a large proportion of gross income year to year, fluctuations in yields can affect overall farm performance considerably.

The results of Farm W were variable over the three years available:

1964/1965	9.25%
1965/1966	4.98%
1966/1967	-2.69%
Average	+3.85%

Over these three years, prunes were estimated to contribute an average of 29.09 per cent of total gross income. However in 1966/67 contribution to gross farm income by prunes was estimated at 42.34 per cent. This suggests that perhaps production problems with other fruit may have been a contributing factor in the low 1966/67 return to capital and management result.

Farm R's results for 1967/68 can reasonably be expected to be similar or worse than for 1966/67.

Farm T has the lowest Return to Capital and Management results for all the farms in the Young group and 1967/68 results if available could reasonably have been expected to be similar or worse than those for the three years presented.

The price paid for prunes in the 67 pool was evidently influenced by the very poor production year in 1968; i.e. carry-over from the 67 pool was directed into the more profitable home market to make up the short fall in the 68 pool. With these latter payments made on the 67 pool appearing in subsequent financial years returns may be greater than normally expected. However, it is the first advance which makes up the bulk of a farm's gross income from prunes for any particular year.

M.I.A. farms have a higher Average Total Capital Investment than farms at Young. On the M.I.A., the range in Return to Capital and Management results over the individual years was between - 3.59 per cent and + 12.12 per cent.

Farms C and F have two blocks each run as one operation. Farm A had a large amount of off-farm investment, the income from which was directed into the farm. The addition of these assets to total investment gave farm A the highest Average Total Capital Investment of farms in the M.I.A. group.

Although only two years results for farm C were available it has the highest Return to Capital and Management results for the M.I.A. farms. The effects of lower prune income in 1967/68 are not expected to be as great in the M.I.A. as at Young.

One factor that can make for year to year variation in income and other measures of farm performance is alternate bearing of trees, i.e. one heavy crop then a light crop the following year. This appears to be the case with citrus fruit and canning fruit.

Return to Capital and Management results on most other farms varied from year to year. All farms had one year above 5 per cent with other years varying from less than 1 to 4.5 per cent. Farm D had a negative Return to Capital and Management in 1966/67 and had the lowest average for three years of any farm in the group; + 1.05.

Farm B with an average return to capital management over the three years of 2.75 (average includes 1967/68) was the next lowest for the group.

Farm E has no 1967/68 results and had an average of + 5.55 per cent for the three years presented. Farm F, with 1967/68 results, had a three year average of + 4.90 return to capital management.

Table 11

Percentage Return to Capital and Management

FARM	1964/65	1965/66	1966/67	1967/68	3 YEAR AVERAGE
			M.I.A.		
A		+ 11.22	+ 8.81	+ 5.48	+ 8.65
B		+ 0.12	+ 5.25	+ 2.86	+ 2.75
C		+ 12.12	+ 8.42		+ 10.10
D		+ 5.79	- 3.59	+ 1.45	+ 1.05
E	+ 4.59	+ 2.12	+ 9.38		+ 5.55
F		+ 4.41	+ 4.57	+ 5.73	+ 4.90
			YOUNG		
R		+ 1.51	- 1.68		- 0.08
S		+ 4.29	+ 10.88	- 0.99	+ 4.73
T	- 0.27	- 7.69	- 4.88		- 4.28
W	+ 9.25	+ 4.98	- 2.69		+ 3.85
X	+ 15.61	+ 13.48	+ 11.42		+ 13.50
Y		+ 6.74	+ 8.00	- 6.06	2.89
Z		+ 8.22	+ 9.08	- 4.47	+ 4.30

4. SUMMARY AND CONCLUSIONS

The following conclusions arose from the study.

+ On the M.I.A., 61 per cent of prune growers had less than 5 acres of D'Agen variety prunes.

+ At Young only 7 per cent of growers had less than 5 acres of D'Agen prunes. Sixty-two per cent had between 5 and 20 acres of D'Agen prunes.

+ Per acre yields were much lower at Young than on M.I.A. farms. The seven Young farms had a 3-year weighted average yield of 0.569 dry tons per acre, of both varieties. On the M.I.A., the 3-year weighted average yield per acre for the six farms was 2.199 tons per acre of both varieties.

+ Under the dryland production conditions of Young year to year yield fluctuations are much greater than on the M.I.A.

+ Drought affected yields in both areas in 1967/68 ('68 crop season) but effects were much greater at Young.

+ Two study farms at Young each had a total production of less than 1 dry ton for 1967/68. Production in 1968 at Young was the lowest since 1949.

+ Prunes on the M.I.A. contribute proportionately less to fruit income than at Young. Farms S,R, and Z at Young have no fruit income other than prunes.

+ Prunes at Young contribute proportionately more to Total Gross Farm Income than on the M.I.A. farms.

+ Net Disposable Income was much higher on M.I.A. farms than on farms at Young.

+ Net Farm Incomes were lower on farms at Young than on M.I.A. farms. The range in Net Farm Incomes on farms at Young over the years presented was between - \$467 and + \$9,250. The range on the M.I.A. was between \$3,000 and \$18,000.

+ Average Total Capital Investment was much higher on M.I.A. farms. Much of the investment was in the land.

+ Values of farms on the M.I.A. have continued to rise with the strong demand for horticultural land in the area. These increases in value represent a capital gain but one which is not realised unless the farm is sold.

+ Percentage Return to Capital and Management varied between the two areas and amongst the farms in each area.

+ An average for the two areas is not possible because of the absence of 1967/68 financial results for some farms. The range in percentage Return to Capital and Management of Farms at Young over the individual years was between -7.69 per cent and +15.61 per cent.

Farm X had the highest return to capital and management results for farms at Young and Farm T the lowest. On the M.I.A. the range was between -3.59 per cent and +12.12 per cent. Only one farm on the M.I.A., Farm D, had a negative result for Return to Capital and Management in any year.

+ It is expected that Return to Capital and Management results in 1967/68 for farms at Young where these results were unavailable would be low due mostly to the poor 1968 season.

Appendix A: Income and Expenditure Schedules

Table A1

Farm A

ITEM	1965/66	1966/67	1967/68	3 Year Average
<u>GROSS INCOME</u>				
<u>prunes</u>				
Other fruit				
TOTAL FRUIT INCOME	23,625	20,579	15,056	19,753
Off Farm	2,727	2,866	2,807	2,800
TOTAL GROSS INCOME	26,352	23,445	17,863	22,553
<u>EXPENDITURE</u>				
<u>CAPITAL</u> - Plant	-	-	-	-
Improvement	-	15	66	27
TOTAL CAPITAL EXP.	-	15	66	27
<u>OPERATING COSTS</u>				
<u>OVERHEAD OR FIXED COSTS</u>				
Rent	-	-	-	-
Rates	396	417	442	418
Interest	-	-	-	-
Accountant	73	73	75	74
Bank Charges	3	13	3	6
Vehicle Registration	53	145	140	113
Travelling	-	-	-	-
Rep. & Maint. Plant	286	521	645	484
Rep. & Maint. Imp.	-	-	-	-
Subscriptions	-	-	4	1
Insurance	211	135	329	225
Telephone	52	45	45	47
Miscellaneous	3	3	3	3
TOTAL FIXED COSTS	1,077	1,352	1,686	1,371

Table A1 (Continued)

Farm A

ITEM	1965/66	1966/67	1967/68	3 Year Average
<u>DIRECT OR VARIABLE COSTS</u>				
Water	198	131	207	179
Fuel Oil Grease	639	576	266	494
Electricity	342	363	206	304
Wages	2,315	2,549	1,856	2,240
Dehydration	*	*	*	*
Spray Material etc.	556	486	114	385
Seed Fodder Fertilizer	625	811	404	613
Livestock Expenses	-	-	-	-
Stock Purchases	-	-	-	-
Freight & Cartage	73	10	-	28
Contract	-	-	-	-
TOTAL DIRECT	4,748	4,926	3,053	4,243
<u>TOTAL OPERATING COSTS</u> (Fixed & Variable)	5,825	6,278	4,739	5,614
NET CASH INCOME	+20,527	+17,167	+13,124	16,939
<u>TOTAL CASH OUTLAY</u> (T.O.C. + CAP. EXP.)	5,825	6,293	4,805	5,641
<u>DEFICIT OR SURPLUS</u> (Gross Income - Total Cash Outlay)	+20,527	+17,152	+13,058	+16,912

* Fuel and Labour included elsewhere.

Table A2

Farm B

ITEM	1965/66	1966/67	1967/68	3 Year Average
<u>GROSS INCOME</u>				
Prunes	4,547	4,977	4,430	4,651
Canning Fruit	7,776	11,478	9,693	9,649
Fresh Fruit	1,725	2,078	2,551	2,118
Wine Grapes	3,381	5,372	4,423	4,392
Total Fruit	17,429	23,905	21,097	20,810
Other Farm Income	1,441	1,458	1,606	1,501
TOTAL GROSS INCOME	18,870	25,363	22,703	22,312
<u>EXPENDITURE:</u>				
<u>CAPITAL</u> - Plant	-	-	5,555	1,852
Improvements	-	946	-	315
TOTAL CAPITAL EXP.	-	946	5,555	2,167
<u>OPERATING COSTS:</u>				
<u>OVERHEAD OR FIXED COSTS</u>				
Rent				
Rates	445	445	505	465
Interest	510	495	377	461
Accountant	30	32	60	41
Bank Charges	32	38	45	38
Vehicle Registration	-	-	-	-
Travelling	18	12	30	20
Rep. & Maint. Plant	585	1,121	2,261	1,322
Rep. & Maint. Imp.	258	278	275	270
Subscriptions	54	44	27	42
Insurance	460	549	739	583
Telephone	60	115	117	97
Miscellaneous	-	-	-	-
TOTAL FIXED COSTS	2,452	3,129	4,436	3,339

Table A2 (continued)

Farm B

ITEM	1965/66	1966/67	1967/68	3 Year Average
<u>DIRECT OR VARIABLE COSTS</u>				
Water	850	724	847	807
Fuel Oil and Grease	912	1,032	1,087	1,010
Electricity	140	133	152	142
Wages	5,365	7,456	6,607	6,476
Packing, Grading Dehyd.*	1,301	1,709	1,074	1,361
Spray Materials etc.	2,856	2,402	1,905	2,388
Seed Fodder Fert.	639	469	440	516
Livestock Expenses	-	-	-	-
Freight & Cartage	112	-	-	37
Contract	328	456	-	261
TOTAL DIRECT COSTS	12,503	14,381	12,112	12,998
<u>TOTAL OPERATING COSTS:</u> (Fixed and Direct)				
	14,955	17,510	16,548	16,337
<u>NET CASH INCOME:</u> (G.I. - T.O.C.)				
	+3,915	+7,853	+6,155	+5,975
<u>TOTAL CASH OUTLAY:</u> (T.O.C. & Cap. Exp.)				
	14,955	18,456	22,103	18,504
<u>DEFICIT OR SURPLUS:</u> (Cash Balance)				
	+3,915	+6,907	+ 600	+3,808

* Prune returns net of dehydration charges.

Table A3

Farm C

ITEM	1965/66	1966/67	2 Year Average
<u>GROSS INCOME</u>			
Prunes			
Other fruit			
Total Fruit	36,262	31,900	34,081
Contract	3,170	5,092	4,131
TOTAL GROSS INCOME	39,432	36,992	38,212
<u>EXPENDITURE</u>			
<u>CAPITAL</u> - Plant	-	-	-
Improvement	-	-	-
TOTAL CAPITAL EXP.	-	-	-
<u>OPERATING COSTS</u>			
<u>OVERHEAD OR FIXED COSTS</u>			
Rent	55	55	55
Rates	192	203	198
Interest	1,212	1,232	1,222
Accountant	75	75	75
Bank Charges	-	-	-
Vehicle Registration	-	-	-
Travelling	65	-	32
Rep. & Maint. Plant	1,040	1,009	1,024
Rep. & Maint. Imp.	-	-	-
Subscriptions	-	-	-
Insurance	971	799	885
Telephone	153	160	157
Miscellaneous	25	35	30
TOTAL FIXED COSTS	3,788	3,568	3,678

Table A3 (continued)

Farm C

ITEM	1965/66	1966/67	3 Year Average
<u>DIRECT OR VARIABLE COSTS</u>			
Water	379	471	425
Fuel Oil and Grease	1,309	1,200	1,255
Electricity	618	961	790
Wages	13,400	13,826	13,613
Picking & Grading)	1,344	1,709	1,527
Dehydration)			
Spray Materials	980	1,409	1,194
Seeds Fodder Fertilizers	876	603	739
Livestock Expenses	-	-	-
Freight and Cartage	-	- 40	20
Contract	-	-	-
TOTAL DIRECT	18,906	20,219	19,563
<u>TOTAL OPERATING COSTS</u> (Fixed & Direct)	22,694	23,787	23,241
<u>NET CASH INCOME</u> <u>G.I. - T.O.C.</u>	16,738	+13,205	+14,971
<u>TOTAL CASH OUTLAY</u>	22,694	23,787	23,241
<u>T.O.C. + CAP. EXP.</u>			
<u>DEFICIT OR SURPLUS</u> (CASH BALANCE)	+16,738	+13,205	+14,971

Table A4

Farm D

ITEM	1965/66	1966/67	1967/68	3 year Average
<u>GROSS INCOME</u>				
Prunes				
Other Fruit				
Total Fruit	17,344	14,740	20,418	17,500
Off Farm	86	3	60	50
TOTAL GROSS INCOME	17,430	14,743	20,478	17,550
<u>EXPENDITURE</u>				
<u>CAPITAL - Plant</u>				
Improvement	5	-	24	10
TOTAL CAPITAL EXP.	5	-	64	23
<u>OPERATING COSTS</u>				
<u>OVERHEAD OR FIXED COSTS</u>				
Rent	-	300	400	233
Rates	269	288	327	295
Interest	81	11	8	33
Accountant	32	38	43	38
Bank Charges	5	17	25	16
Vehicle Registration	103	110	112	108
Travelling	-	-	-	-
Rep. & Maint. Plant	508	523	592	541
Rep. & Maint. Impr.	-	-	-	-
Subscriptions	6	10	6	7
Insurance	74	93	43	70
Telephone	92	56	60	69
Miscellaneous	6	2	2	3
TOTAL FIXED COSTS	1,176	1,448	1,618	1,414

Table A4 (Continued)

Farm D

ITEM	1965/66	1966/67	1967/68	3 year Average
<u>DIRECT OR VARIABLE COSTS</u>				
Water	216	427	486	376
Fuel Oil & Grease	712	652	513	626
Electricity	174	164	250	196
Wages	2,647	4,582	6,730	4,653
Dehydration	*	*	*	
Spray Materials etc.	1,003	1,861	1,600	1,488
Seed Fodder Fertilizer	499	1,125	1,519	1,048
Livestock Expenses	-	-	-	-
Freight & Cartage	-	-	45	15
Contract	-	-	-	-
TOTAL DIRECT	5,251	8,811	11,143	8,402
<u>TOTAL OPERATING COSTS</u> (Fixed & Direct)	6,427	10,259	12,761	9,816
<u>NET CASH INCOME</u> G.I. + T.O.C.	+11,003	+4,484	+7,717	+7,734
<u>TOTAL CASH OUTLAY</u> (T.O.C. + CAP. EXP.)	6,432	10,259	12,825	9,839
<u>DEFICIT OR SURPLUS</u> Cash Balance (Gross Income - Total Cash Outlay)	+10,998	+4,484	+7,653	+7,711

* Fuel and Labour Included elsewhere.

Table A5

Farm E

ITEM	1964/65	1965/66	1966/67	3 Year Average
<u>GROSS INCOME</u>				
Prunes				
Other Fruit				
Total Fruit	17,712	15,585	24,971	19,423
Contract Work	148	109		85
Off Farm	142	171	119	144
TOTAL GROSS INCOME	18,002	15,865	25,090	19,652
<u>EXPENDITURE</u>				
<u>CAPITAL - Plant</u>				
Improvements	174	137	998	436
TOTAL CAPITAL EXP.	174	137	1,035	448
<u>OPERATING COSTS</u>				
<u>OVERHEAD OR FIXED COSTS</u>				
Rent				
Rates	384	372	456	404
Interest	378	342	277	332
Accountant	64	64	100	76
Bank Charges	38	32	56	42
Vehicle Registration	78	125	119	107
Travelling	-	-	-	-
Rep. & Maint. Plant	810	991	987	929
Rep. & Maint. Impr.	-	-	-	-
Subscriptions	- 6	-	-	2
Insurance	306	292	399	333
Telephone*	-	-	-	-
Miscellaneous	-	-	37	12
TOTAL FIXED COSTS	2,064	2,218	2,431	2,237

Table A5 (Continued)

Farm E

ITEM	1965/66	1966/67	1967/68	3 Year Average
<u>DIRECT OR VARIABLE COSTS</u>				
Water	270	220	333	274
Fuel Oil & Grease	830	679	1,110	873
Electricity*	130	231	299	220
Wages	4,366	4,114	7,504	5,328
Dehydration	**	**	**	**
Spray Materials etc.	2,204	1,301	1,248	1,585
Seed Fodder Fertilizers	338	1,088	706	711
Livestock Expenses	-	7	-	2
Stock Purchases	-	-	-	-
Freight & Cartage	30	31	47	36
Contract	4	-	-	1
TOTAL DIRECT	8,172	7,671	11,247	9,030
<u>TOTAL OPERATING COSTS</u> (Fixed & Direct)	10,236	9,889	13,678	11,267
<u>NET CASH INCOME</u> (G.I. - T.O.C.)	+7,766	+5,976	+11,412	+8,385
<u>TOTAL CASH OUTLAY</u> (T.O.C. & CAP EXP.)	10,410	10,026	14,713	11,715
<u>DEFICIT OR SURPLUS</u> (Gross Income - Total Cash Outlay)	+7,592	+5,839	+10,377	+7,937

* Telephone included with electricity.

** Fuel and labour included elsewhere.

Table A6

Farm F

ITEM	1965/66	1966/67	1967/68	3 Year Average
<u>GROSS INCOME</u>				
Prunes				
Other Fruit				
<u>Total Fruit</u>	26,790	31,998	27,170	28,653
Contract Work	-	60	19	26
Off Farm	-	40	33	24
TOTAL GROSS INCOME	26,790	32,098	27,222	28,703
<u>EXPENDITURE</u>				
<u>CAPITAL</u> - Plant	-	-	-	-
Improvements	-	130	84	71
TOTAL CAPITAL EXP.	-	130	84	71
<u>OPERATING COSTS</u>				
<u>OVERHEAD OR FIXED COSTS</u>				
Rent	-	-	-	-
Rates	419	433	459	437
Interest	269	397	384	350
Accountant	-	68	90	53
Bank Charges	43	57	-	33
Vehicle Registration	178	179	168	175
Travelling	-	-	-	-
Rep. & Maint. Plant	224	735	257	405
Rep. & Maint. Imp.	542	567	821	643
Subscriptions	-	-	-	-
Insurance	513	440	402	452
Telephone	44	96	85	75
Miscellaneous	41	-	9	17
TOTAL FIXED COSTS	2,273	2,972	2,675	2,640

Table A6 (continued)

Farm F

ITEM	1965/66	1966/67	1967/68	3 Year Average
<u>DIRECT OR VARIABLE COSTS</u>				
Water	699	942	781	807
Fuel Oil & Greese	846	859	891	865
Electricity	-	-	-	-
Wages	9,221	12,156	8,230	9,869
Packing & Grading	*	*	*	*
Dehydration*	938	2,440	1,164	1,514
Spray Materials etc.	1,570	99	871	847
Seed Fodder Fertilizer	1,538	2,494	1,281	1,771
Livestock Expenses	-	-	-	-
Freight & Cartage	8	352	273	211
Contract	-	45	28	24
TOTAL DIRECT	14,820	19,387	13,519	15,908
<u>TOTAL OPERATING COSTS</u> (Fixed and Direct)	17,093	22,359	16,194	18,548
<u>NET CASH INCOME</u> (G.I. - T.O.C.)	+9,697	+9,739	+11,028	+10,155
<u>TOTAL CASH OUTLAY</u> (T.O.C. + CAP. EXP.)	17,093	22,487	16,278	18,619
<u>DEFICIT OR SURPLUS</u>				
Cash Balance (Gross Income - Total Cash Outlay)	+9,697	+9,611	+10,944	+10,084

* Packing and grading charges for other fruit only.
Prune returns net of dehydration charges.

Table A7

Farm R

ITEM	1965/66	1966/67	2 Year Average
<u>GROSS INCOME</u>			
Prunes	5,698	6,030	5,864
Wool	1,980	1,683	1,832
Livestock Sales	1,075	72	573
Other Farm	3,002	-	1,501
TOTAL GROSS INCOME	11,755	7,785	9,770
<u>EXPENDITURE</u>			
<u>CAPITAL - Plant</u>			
Improvement	-	124	62
	-	9	4
TOTAL CAPITAL EXP.	-	133	66
<u>OPERATING COSTS</u>			
<u>OVERHEAD OR FIXED COSTS</u>			
Rent	110	110	110
Rates	162	172	167
Interest	191	137	164
Accountant	10	40	25
Bank Charges	24	28	25
Vehicle Registration	145	157	151
Travelling	-	-	-
Rep. & Maint. Plant	127	376	252
Rep. & Maint. Imp.	600	159	380
Subscriptions	-	6	3
Insurance	92	280	186
Water	-	-	-
Telephone	31	48	39
Miscellaneous	-	-	-
TOTAL FIXED COSTS	1,492	1,513	1,502

Table A7 (Continued)

Farm R

ITEM	1965/66	1966/67	2 Year Average
<u>DIRECT OR VARIABLE COSTS</u>			
Fuel Oil & Grease	673	460	567
Electricity	46	66	56
Wages	946	1,661	1,304
Dehydration	*	*	*
Spray Materials, etc.	160	123	141
Seeds, Fodder, Fertilizer	1,487	491	989
Livestock Expenses	115	176	145
Sheep Purchases	1,068	34	551
Freight & Cartage	-	-	-
Contract	601	410	506
TOTAL DIRECT COSTS	5,096	3,421	4,259
<u>TOTAL OPERATING COSTS</u> (Fixed and Direct)	6,588	4,934	5,761
NET CASH INCOME	+5,167	+2,851	+4,009
<u>TOTAL CASH OUTLAY</u> (T.O.C. + CAP. EXP.)	6,588	5,067	5,827
<u>DEFICIT OR SURPLUS</u> (Gross Income - Total Cash Outlay)	+5,167	+2,718	+3,943

*Fuel and Labour included elsewhere.

Table A8

Farm S

ITEM	1965/66	1966/67	1967/68	3 Year Average
<u>GROSS INCOME</u>				
Prunes	13,113	12,905	5,616	10,545
Wool	-	1,408	1,172	860
Wheat	-	971	109	360
Sheep Sales	268	2,478	309	1,018
Other	-	-	-	-
TOTAL GROSS INCOME	13,381	17,762	7,206	12,783
<u>EXPENDITURE</u>				
<u>CAPITAL - Plant</u>				
Improvements	64	-	-	21
TOTAL CAPITAL EXP.	64	-	140	68
<u>OPERATING COSTS</u>				
<u>OVERHEAD OR FIXED COSTS</u>				
Rent	158	159	160	159
Rates	134	175	174	161
Interest	336	558	492	462
Accountant	25*	25	25	25
Bank Charges	40*	41	43	41
Vehicle Registration	48	49	146	81
Travelling	-	-	-	-
Rep. & Maint. Plant	288	173	195	219
Rep. & Maint. Improve.	95	527	8	210
Subscriptions	-	-	-	-
Insurance	126*	114	100	113
Telephone	22	27	16	22
Water	239	21	202	154
Miscellaneous	28	-	-	9
TOTAL FIXED COSTS	1,539	1,869	1,561	1,656

Table A8 (Continued)

Farm S

ITEM	1965/66	1966/67	1967/68	3 Year Average
<u>DIRECT OR VARIABLE COSTS</u>				
Fuel Oil Grease	316	945	437	566
Electricity	160*	179	162	167
Wages	2,800	3,863	-	2,221
Dehydration**	64	-	-	21
Spray Materials etc.	649	786	467	634
Seed Fodder Fertilizer	597	498	1,215	770
Livestock Expenses	139	90	42	90
Sheep Purchases	804	-	-	268
Freight & Cartage	82	61	-	48
Contract	197	191	232	207
TOTAL DIRECT	5,808	6,613	2,555	4,992
<u>TOTAL OPERATING COSTS</u> (Fixed & Direct)	7,347	8,482	4,116	6,648
<u>NET CASH INCOME</u> G.I. - T.O.C.	+6,034	+9,280	+3,090	+6,135
<u>TOTAL CASH OUTLAY</u> (T.O.C. + C.A.D. Exp.)	7,411	8,482	4,256	6,716
<u>DEFICIT OR SURPLUS</u> (Gross Income - Total Cash Outlay)	+5,970	+9,280	+2,950	+6,067

* Insurance Electricity A/C, Bank Charges estimates only due to incomplete figures for 1965/66.

** Prune returns net of dehydration charges where cooperative dehydration used fuel and labour elsewhere for on farm dehydration.

Table A9

Farm T

ITEM	1964/65	1965/66	1966/67	3 Year Average
<u>GROSS INCOME</u>				
Prunes	6,134	2,893	4,358	4,462
Other Fruit	70	75	487	211
<u>Total Fruit</u>	6,204	2,968	4,845	4,673
Wool	810	877	670	786
Livestock Sales	1,765	25	492	760
Contract	400	-	-	133
TOTAL GROSS INCOME	9,179	3,870	6,007	6,352
<u>EXPENDITURE</u>				
<u>CAPITAL</u> - Plant	-	88	19	36
Improvements	-	22	565	195
TOTAL CAPITAL EXP.	-	110	584	231
<u>OPERATING COSTS</u>				
<u>OVERHEAD OR FIXED COSTS</u>				
Rent	108	108	108	108
Rates	102	102	102	102
Interest	391	581	503	492
Accountant	-	-	-	-
Bank Charges	32	35	79	49
Vehicle Registration	-	-	-	-
Travelling	-	-	-	-
Rep. & Maint. Plant	734	658	290	561
Rep. & Maint. Improve.	-	92	-	31
Subscriptions	-	-	51	17
Insurance	128	149	283	187
Water	-	-	-	-
Telephone)_	180	95	66	54
Miscellaneous)		26	35	80
TOTAL FIXED COSTS	1,675	1,846	1,517	1,681

Table A9 (Continued)

Farm T

ITEM	1964/65	1965/66	1966/67	3 Year Average
<u>DIRECT OR VARIABLE COSTS</u>				
Fuel Oil & Grease	552	118	363	344
Electricity	272	34	123	143
Wages	1,864	563	1,114	1,180
Dehydration	-*	-*	-*	-
Spray Materials etc.	409	296	513	406
Feed Fodder Fert.	140	433	482	352
Livestock Expenses	185	37	89	103
Sheep Purchases	-	-	-	-
Freight & Cartage	75	12	70	52
Contract	140	197	56	131
TOTAL DIRECT	3,637	1,690	2,810	2,711
<u>TOTAL OPERATING COSTS</u> (FIXED & DIRECT)	5,312	3,536	4,327	4,392
<u>NET CASH INCOME</u> (G.I.-T.O.C.)	+3,867	+334	+1,960	+1,960
<u>TOTAL CASH OUTLAY</u> (T.O.C. + CAP. EXP)	5,312	3,646	4,911	4,623
<u>DEFICIT OR SURPLUS</u> (Gross Income- Total Cash Outlay)	+3,867	+224	+1,096	+1,729

* Fuel and Labour included elsewhere.

Table A10

Farm W.

ITEM	1964/65	1965/66	1966/67	3 Year Average
Prunes	5,600			
Other Fruit	16,656			
<u>Total Fruit</u>	22,256	18,479	14,491	18,408
Off Farm Income	248	322	267	279
TOTAL GROSS INCOME	22,504	18,801	14,758	18,687
<u>EXPENDITURE</u>				
<u>CAPITAL Plant</u>	230	873	309	471
Improvements	-	101	-	33
<u>TOTAL CAPITAL EXP.</u>	230	974	309	504
<u>OPERATING COSTS</u>				
<u>OVERHEAD OR FIXED COSTS</u>				
Rent	164	164	82	137
Rates	91	91	131	104
Interest	458	527	527	504
Accountant	29	59	36	41
Bank Charges	38	-	-	13
Vehicle Registration	-	-	-	-
Travelling	-	-	-	-
Rep. & Maint. Plant	1,026	706	659	797
Rep. & Maint. Imp.	172	104	-	92
Subscriptions	-	-	-	-
Insurance	466	228	204	299
Water	-	-	-	-
Telephone	55	44	38	46
Miscellaneous	9	-	-	3
TOTAL FIXED	2,508	1,923	1,677	2,036

Table A10 (Continued)

Farm W

ITEM	1964/65	1965/66	1966/67	3 Year Average
<u>DIRECT OR VARIABLE COSTS</u>				
Fuel Oil and Grease	614	1,035	595	748
Electricity	541	556	526	541
Wages	5,486	5,170	4,864	5,173
Dehydration	*	*	*	*
Spray Materials etc.) Seed Fodder Fert.)	3,670	3,059	4,271	3,667
Livestock Expenses	-	-	-	-
Stock Purchases	-	-	-	-
Freight & Cartage	112	34	143	96
Contract	-	-	-	-
TOTAL DIRECT	10,423	9,854	10,399	10,225
<u>TOTAL OPERATING COSTS</u> (Fixed & Direct)	12,931	11,777	12,076	12,261
<u>NET CASH INCOME</u> (G.I.-T.O.C.)	+9,573	+7,024	+2,686	+6,426
<u>TOTAL CASH OUTLAY</u> (T.O.C. & CAP. EXP)	13,161	12,751	12,385	12,765
<u>DEFICIT OR SURPLUS</u> (Gross Income - Total Cash Outlay)	+9,343	+6,050	+2,373	+5,922

* Prune Returns Net of Dehydration Charges.

Table A11

Farm X

ITEM	1964/65	1965/66	1966/67	3 Year Average
Prunes	11,198	13,057	11,232	11,829
Other Fruit	7,338	3,806	6,813	5,985
<u>Total Fruit</u>	18,536	16,863	18,045	17,814
Cattle	192	477	558	409
TOTAL GROSS INCOME	18,728	17,340	18,603	18,224
<u>EXPENDITURE</u>				
<u>CAPITAL</u> - Plant	-	-	-	-
Improvements	-	-	-	-
<u>TOTAL CAPITAL EXP.</u>				
<u>OPERATING COSTS</u>				
<u>OVERHEAD OR FIXED COSTS</u>				
Rent	-	96	96	64
Rates	62	84	96	81
Interest	2	-	-	1
Accountant	16	18	28	21
Bank Charges	17	15	10	14
Vehicle Registration	-	-	286	95
Travelling	-	50	100	50
Rep. & Maint. Plant	525	485	338	449
Rep. & Maint. Imp.	98	28	-	42
Subscription	6	6	-	4
Insurance	80	377	359	239
Water	-	38	59	32
Telephone	91	93	88	91
Miscellaneous	2	9	11	7
TOTAL FIXED	899	1,299	1,371	1,190

Table A11 (Continued)

Farm X

ITEM	1964/65	1965/66	1966/67	3 Year Average
<u>DIRECT OR VARIABLE COSTS</u>				
Fuel, Oil & Grease	437	411	371	406
Electricity	88	88	89	88
Wages	3,166	1,575	3,392	2,711
Dehydration	‡	‡	‡	‡
Spray Materials etc.	3,280	4,061	4,279	3,873
Seed Fodder Fert.	-	-	24	8
Livestock Expenses	-	2	-	1
Stock Purchases	-	-	-	-
Freight & Cartage	8	-	-	3
Contract	-	-	-	-
TOTAL DIRECT	6,979	6,137	8,155	7,090
<u>TOTAL OPERATING COSTS</u> (Fixed & Direct)	7,078	7,436	9,526	8,280
<u>NET CASH INCOME</u> (G.I. - T.O.C.)	+10,850	+9,904	+9,077	+9,944
<u>TOTAL CASH OUTLAY</u> (T.O.C. & CAP. EXP)	7,878	7,436	9,526	8,280
<u>DEFICIT OR SURPLUS</u> (Gross Income - Total Cash Outlay)	+10,850	+9,904	+9,077	+9,944

‡ Prune Returns Net of Dehydration costs.

TABLE A12

Farm Y

ITEM	1965/66	1966/67	1967/68	3 Year Average
Prunes				
Other Fruit				
Total Fruit	14,629	16,047	6,671	12,449
Livestock Sales	725		68	264
TOTAL GROSS INCOME	15,354	16,047	6,739	12,713
<u>EXPENDITURE</u>				
<u>CAPITAL</u> - Plant	436	4,504	493	1,811
Improvements	86	252	-	113
TOTAL CAPITAL EXP.	522	4,756	493	1,924
<u>OPERATING COSTS</u>				
<u>OVERHEAD OR FIXED COSTS</u>				
Rent	58	58	58	58
Rates	62	90	130	94
Interest	37	810	256	368
Accountant	20	20	25	22
Bank Charges	19	33	69	40
Vehicle Registration	-	-	-	-
Travelling	-	-	-	-
Repair & Maint. Plant	386	66	296	249
Repair & Maint. Imp.	168	111	36	105
Subscriptions	-	40	17	19
Insurance	153	164	110	142
Water	-	-	-	-
Telephone	*	*	*	*
Miscellaneous	62	42	103	69
TOTAL FIXED	965	1,434	1,100	1,166

Table A12 (Continued)

Farm X

ITEM	1965/66	1966/67	1967/68	3 Year Average
<u>DIRECT OR VARIABLE COSTS</u>				
Fuel Oil & Grease	701	636	781	706
Electricity*	67	76	254	133
Wages	2,590	2,571	1,186	2,116
Dehydration	1,050	1,341	162	851
Syray Materials etc.	221	3,520	1,006	1,579
Seed Fodder Fertilizer	2,640	347	440	1,142
Livestock Expenses	-	-	-	-
Stock Purchases	739	-	-	246
Freight & Cartage	6	104	29	46
Contract	87	90	-	59
TOTAL DIRECT	8,101	8,675	3,858	6,878
<u>TOTAL OPERATING COSTS</u> (Fixed & Direct)				
	9,066	10,109	4,958	8,044
<u>NET CASH INCOME</u> (G.I. - T.O.C.)				
	+6,288	+5,938	+1,781	+4,669
<u>TOTAL CASH OUTLAY</u> (T.O.C. + CAP. EXP.)				
	9,588	14,865	5,451	9,968
<u>DEFICIT OR SURPLUS</u> (Gross Income - Total Cash Outlay)				
	+5,766	+1,182	+1,288	+2,745

* Telephone included with electricity.

Table A13

Farm Z

ITEM	1965/66	1966/67	1967/68	3 Year Average
Prunes	9,414	9,485	4,434	7,778
Wool	1,129	1,524	1,458	1,370
Sheep Sales	241	340	112	231
Cattle Sales	388	352	190	310
Wheat	21	-	-	7
Off Farm	1,025	998	858	960
TOTAL GROSS INCOME	12,218	12,699	7,052	10,656
<u>EXPENDITURE</u>				
<u>CAPITAL</u> - Plant	1,090	2,031	440	1,187
Improvements	1,546	105	-	550
TOTAL CAPITAL EXP.	2,636	2,136	440	1,737
<u>OPERATING COSTS</u>				
<u>OVERHEAD OR FIXED COSTS</u>				
Rent	122	122	122	122
Rates	108	89	126	108
Interest	-	76	332	136
Accountant	26	26	40	31
Bank Charges	8	16	-	8
Vehicle Registration	-	-	90	30
Travelling	-	-	-	-
Rep. & Maint. Plant	307	645	1,103	685
Rep. & Maint. Imp.	-	-	-	-
Subscriptions	11	7	2	7
Insurance	165	133	181	160
Water	-	-	52	17
Telephone	60	60	29	49
Miscellaneous	-	37	92	43
TOTAL FIXED	807	1,211	2,169	1,396

Table A13 (Continued)

Farm Z

ITEM	1965/66	1966/67	1967/68	3 Year Average
<u>DIRECT OR VARIABLE COSTS</u>				
Fuel Oil & Grease	258	244	367	290
Electricity	120	274	109	168
Wages	1,944	2,681	930	1,852
Dehydration	*	50*	*	17
Spray Materials etc.	672	425	768	622
Seed Fodder Fertilizer	353	166	-	173
Livestock Expenses	166	129	412	235
Stock Purchases	623	-	-	207
Freight & Cartage	9	6	-	5
Contract	-	10	-	3
TOTAL DIRECT	4,145	3,985	2,586	3,572
<u>TOTAL OPERATING COSTS</u> (Fixed & Direct)	4,952	5,196	4,755	4,968
<u>NET CASH INCOME</u> (G.I. - T.O.C.)	+7,266	+7,503	+2,297	+5,688
<u>TOTAL CASH OUTLAY</u> (T.O.C. & CAP. EXP.)	7,588	7,332	5,195	6,705
<u>DEFICIT OR SURPLUS</u> (GROSS INCOME - Total Cash Outlay)	+4,630	+5,367	+1,857	+3,951

* Prune returns net of dehydration charges
(\$50.00 contract outside).

Appendix B: Financial Results

Table B1

FINANCIAL RESULTS

FARM "A", M.I.A.

ITEMS	65/66	66/67	67/68	Average 3 Years
<u>GROSS INCOME:</u>				
Prunes	} 23,625	20,579	15,056	19,753
Other Fruit				
Off farm income	2,727	2,866	2,807	2,800
TOTAL GROSS FARM INCOME	26,352	23,445	17,863	22,553
<u>Less</u> Cash Operating Costs	5,825	6,278	4,739	5,614
<u>Plus</u> Depreciation -				
Plant	1,775	1,775	1,775	1,775
Structures	253	253	253	253
TOTAL OPERATING COSTS	7,853	8,306	6,767	7,642
NET DISPOSABLE INCOME	18,499	15,139	11,096	14,911
Plus Rent and Interest	—	—	—	—
NET FARM INCOME	18,499	15,139	11,096	14,911
<u>Less</u> Owner Operator Labour Allowance & Family Labour	4,500	4,500	4,500	4,500
<u>NET \$ RETURN TO CAPITAL AND MANAGEMENT</u>	13,999	10,639	6,596	10,411
RETURN TO CAPITAL (%)	+11.22	+ 8.81	+5.48	+8.65
<u>AVERAGE TOTAL CAPITAL INVESTMENT</u>	\$120,259 excluding house			

Table B2

FINANCIAL RESULTS

FARM "B", M.I.A.

ITEMS	65/66	66/67	67/68	Average 3 years
<u>GROSS INCOME:</u>				
Prunes	4,547	4,977	4,430	4,651
Canning fruits	7,776	11,478	9,693	9,649
Wine grapes	1,725	2,078	2,551	2,118
Fresh Fruits	3,381	5,372	4,423	4,392
Off farm income	1,441	1,458	1,606	1,501
TOTAL GROSS FARM INCOME	18,870	25,363	22,703	22,312
<u>Less</u> Cash Operating Costs	14,955	17,510	16,548	16,337
<u>Plus</u> Depreciation -				
Plant	1,110	1,110	1,110	1,110
Structures	218	218	218	218
TOTAL OPERATING COSTS	16,283	18,838	17,876	17,665
NET DISPOSABLE INCOME	2,587	6,525	4,827	4,647
<u>Plus</u> Rent and Interest	510	495	377	460
NET FARM INCOME	3,097	7,020	5,204	5,107
<u>Less</u> Owner Operator Labour Allowance & Family Labour	3,000	3,000	3,000	3,000
<u>NET \$ RETURN TO CAPITAL</u> AND MANAGEMENT	+97	+4,020	+2,204	+2,107
RETURN TO CAPITAL (%)	+0.12	+5.25	+2.86	+2.75
<u>AVERAGE TOTAL CAPITAL</u> <u>INVESTMENT</u>	\$76,476 excluding house			

Table B3

FINANCIAL RESULTS

FARM "C", M.I.A.

ITEMS	65/66	66/67	Average 2 years
<u>GROSS INCOME:</u>			
Prunes	} 36,262	31,900	34,081
Other fruit			
Wool			
Livestock sales			
Contact	3,170	5,092	4,131
TOTAL GROSS FARM INCOME	39,432	36,992	38,212
<u>Less</u> Cash Operating Costs	22,694	23,787	23,241
<u>Plus</u> Depreciation -			
Plant	1,200	1,200	1,200
Structures	320	320	320
TOTAL OPERATING COSTS	24,214	25,307	24,761
NET DISPOSABLE INCOME	15,218	11,685	13,451
<u>Plus</u> Rent and Interest	1,267	1,287	1,277
NET FARM INCOME	16,485	12,972	14,728
<u>Less</u> Owner Operator Labour Allowance	6,000	6,000	6,000
<u>NET \$ RETURN TO CAPITAL</u>			
AND MANAGEMENT	+10,485	+6,972	+8,728
RETURN TO CAPITAL (%)	+12.12	+8.42	+10.10
<u>AVERAGE TOTAL CAPITAL</u>			
<u>INVESTMENT</u>		\$86,370	excluding one house.

Table B4

FINANCIAL RESULTS

FARM "D", M.I.A.

ITEMS	65/66	66/67	67/68	Average 3 years
<u>GROSS INCOME:</u>				
Prunes	} 17,344	14,740	20,418	17,500
Other fruit				
Other farm income	86	3	60	50
TOTAL GROSS FARM INCOME	17,430	14,743	20,478	17,550
<u>Less</u> Cash Operating Costs	6,427	10,259	12,734	9,806
<u>Plus</u> Depreciation -				
Plant	940	940	940	940
Structures	260	260	260	260
TOTAL OPERATING COSTS	7,627	11,459	13,934	11,006
NET DISPOSABLE INCOME	9,803	3,284	6,544	6,544
<u>Plus</u> Rent and Interest	81	311	408	266
NET FARM INCOME	9,884	3,595	6,952	6,810
<u>Less</u> Owner Operator Labour Allowance & Family Labour	6,000	6,000	6,000	6,000
<u>NET \$ RETURN TO CAPITAL</u>				
AND MANAGEMENT	3,884	-2,405	+952	+810
RETURN TO CAPITAL (%)	+5.79	-3.59	+1.45	+1.05
<u>AVERAGE TOTAL CAPITAL</u>				
<u>INVESTMENT</u>	\$66,990 excluding one house.			

Table B5

FINANCIAL RESULTS

FARM "E", M.I.A.

ITEMS	64/65	65/66	66/67	Average 3 years
<u>GROSS INCOME:</u>				
Prunes	}17,712	15,585	24,791	19,423
Other fruits		109		85
Contract		171	119	144
Other income	142			
TOTAL GROSS FARM INCOME	18,002	15,965	25,090	19,652
<u>Less</u> Cash Operating Costs	10,236	9,889	13,678	11,267
<u>Plus</u> Depreciation -				
Plant	1,655	1,655	1,655	1,655
Structures	94	94	94	94
TOTAL OPERATING COSTS	11,985	11,638	15,427	13,016
NET DISPOSABLE INCOME	6,017	4,227	9,663	6,636
<u>Plus</u> Rent and Interest	378	342	277	332
NET FARM INCOME	6,395	4,569	9,940	6,968
<u>Less</u> Owner Operator Labour Allowance	3,000	3,000	3,000	3,000
<u>NET \$ RETURN TO CAPITAL</u>				
AND MANAGEMENT	+3,395	+1,569	+6,940	+3,968
RETURN TO CAPITAL (%)	+4.59	+2.12	+9.38	+5.55
<u>AVERAGE TOTAL CAPITAL</u>				
<u>INVESTMENT</u>	\$73,915 excluding house.			

Table B6

FINANCIAL RESULTS

FARM "F", M.I.A.

ITEMS	65/66	66/67	67/68	Average 3 years			
<u>GROSS INCOME:</u>							
Prunes	} 26,790	31,998	27,170	28,653			
Other fruits							
Contract					60	19	26
Other income					40	33	24
TOTAL GROSS FARM INCOME	26,790	32,098	27,222	28,703			
<u>Less</u> Cash Operating Costs	17,093	22,359	16,194	18,548			
<u>Plus</u> Depreciation -							
Plant	1,697	1,697	1,697	1,697			
Structures	405	405	405	405			
TOTAL OPERATING COSTS	19,195	24,461	18,296	20,650			
NET DISPOSABLE INCOME	7,595	7,637	8,926	8,053			
<u>Plus</u> Rent and Interest	269	397	384	350			
NET FARM INCOME	7,864	8,034	9,310	8,403			
<u>Less</u> Owner Operator Labour Allowance	3,000	3,000	3,000	3,000			
<u>NET \$ RETURN TO CAPITAL</u>							
AND MANAGEMENT	+4,864	+5,034	+6,310	+5,403			
RETURN TO CAPITAL (%)	+4.41	+4.57	+5.73	+4.90			
<u>AVERAGE TOTAL CAPITAL</u>							
<u>INVESTMENT</u>	\$110,092 excluding house.						

Table B7
 FINANCIAL RESULTS
 FARM "R", Young

ITEMS	65/66	66/67	Average 2 years
<u>GROSS INCOME:</u>			
Prunes	5,698	6,030	5,864
Other fruit			
Wool	1,980	1,683	1,832
Livestock sales	1,075	72	573
Other farm	3,002	—	1,501
TOTAL GROSS FARM INCOME	11,755	7,785	9,770
<u>Less</u> Cash Operating Costs	6,588	4,934	5,761
<u>Plus</u> Depreciation -			
Plant	1,053	1,053	1,053
Structures	293	293	293
TOTAL OPERATING COSTS	7,934	6,280	7,107
NET DISPOSABLE INCOME	3,821	1,505	2,663
<u>Plus</u> Rent and Interest	301	247	274
NET FARM INCOME	4,122	1,752	2,937
<u>Less</u> Owner Operator Labour Allowance	3,000	3,000	3,000
<u>NET \$ RETURN TO CAPITAL</u> AND MANAGEMENT	+1,122	-1,248	-63
<u>RETURN TO CAPITAL</u> (%) (including value of stock)	+1.51	-1.68	-0.08
<u>AVERAGE TOTAL CAPITAL</u> INVESTMENT	\$74,102 including stock excluding house including second farm		

Table B8

FINANCIAL RESULTS

FARM "S" YOUNG

ITEMS	65/66	66/67	67/68	Average 3 years
<u>GROSS INCOME:</u>				
Prunes	13,113	12,905	5,616	10,545
Wool	--	1,408	1,172	860
Sheep sales	268	2,478	309	1,018
Cattle sales				
Wheat		971	109	360
Off farm income				
TOTAL GROSS FARM INCOME	13,381	17,762	7,206	12,783
<u>Less</u> Cash Operating Costs	7,347	8,482	4,116	6,648
<u>Plus</u> Depreciation -				
Plant	1,085	1,085	1,085	1,085
Structures	180	180	180	180
TOTAL OPERATING COSTS	8,612	9,747	5,381	7,913
NET DISPOSABLE INCOME	4,769	8,015	1,825	4,870
<u>Plus</u> Rent and Interest	494	717	652	621
NET FARM INCOME	5,263	8,732	2,477	5,491
<u>Less</u> Owner Operator Labour Allowance	3,000	3,000	3,000	3,000
NET \$ RETURN TO CAPITAL				
AND MANAGEMENT	+2,263	+5,732	-523	+2,491
<u>RETURN TO CAPITAL</u> (%) (including value of stock)	+4.29	+10.88	+0.99	+4.73
<u>AVERAGE TOTAL CAPITAL</u> <u>INVESTMENT</u>	\$52,661 including stock excluding house			

Table B9

FINANCIAL RESULTS

FARM "A", M.I.A.

ITEMS	64/65	65/66	66/67	Average 3 years
<u>GROSS INCOME:</u>				
Prunes	6,134	2,893	4,358	4,462
Wool	810	877	670	786
Sheep sales	} 1,765	25	492	760
Cattle sales				
Other fruit	70	75	487	211
Contract	400	--	--	133
TOTAL GROSS FARM INCOME	9,179	3,870	6,007	6,352
<u>Less</u> Cash Operating Costs	5,312	3,536	4,327	4,392
<u>Plus</u> Depreciation -				
Plant	1,254	1,254	1,254	1,254
Structures	236	236	236	236
TOTAL OPERATING COSTS	6,802	5,026	5,817	5,881
NET DISPOSABLE INCOME	2,377	-1,156	190	470
<u>Plus</u> Rent and Interest	499	689	611	599
NET FARM INCOME	2,876	-467	801	1,069
<u>Less</u> Owner Operator Labour Allowance	3,000	3,000	3,000	3,000
<u>NET \$ RETURN TO CAPITAL</u>				
AND MANAGEMENT	-124	-3,467	-2,199	-1,931
<u>RETURN TO CAPITAL</u> (%)				
(including value of stock)	-0.27	-7.69	-4.88	-4.28
<u>AVERAGE TOTAL CAPITAL</u>	\$45,054 including stock			
<u>INVESTMENT</u>	excluding house			

Table B10

FINANCIAL RESULTS

FARM "W", YOUNG

ITEMS	64/65	65/66	66/67	Average 3 years
<u>GROSS INCOME</u>				
Prunes	5,600	}18,479	}14,491	}18,408
Other fruit	16,656			
Wool				
Off farm income	248	322	267	279
<u>TOTAL GROSS FARM INCOME</u>	22,504	18,801	14,758	18,687
<u>Less Cash Operating Costs</u>	12,931	11,777	12,076	12,261
<u>Plus Depreciation -</u>				
Plant	1,384	1,384	1,384	1,384
Structures	460	460	460	460
<u>TOTAL OPERATING COSTS</u>	14,775	13,621	13,920	14,105
<u>NET DISPOSABLE INCOME</u>	7,729	5,180	838	4,582
<u>Plus Rent and Interest</u>	622	691	609	641
<u>NET FARM INCOME</u>	8,351	5,871	1,447	5,223
<u>Less Owner Operator Labour Allowance</u>	3,000	3,000	3,000	3,000
<u>NET \$ RETURN TO CAPITAL</u>				
<u>AND MANAGEMENT</u>	+5,351	+2,871	-1,553	+2,223
<u>RETURN TO CAPITAL (%)</u>	+9.25	+4.98	-2.69	+3.85
<u>AVERAGE TOTAL CAPITAL</u>	\$57,624 excluding house			
<u>INVESTMENT</u>				

Table B11

FINANCIAL RESULTS
FARM "X" YOUNG

ITEMS	64/65	65/66	66/67	Average 3 years
<u>GROSS INCOME:</u>				
Prunes	11,198	13,057	11,232	11,829
Other fruit	7,338	3,806	6,813	5,985
Sheep sales) 192	477	558	409
Cattle sales				
Wheat				
Off farm income				
TOTAL GROSS FARM INCOME	18,728	17,340	18,603	18,224
<u>Less</u> Cash Operating Costs	7,878	7,436	9,526	8,280
<u>Plus</u> Depreciation -				
Plant	1,298	1,298	1,298	1,298
Structures	297	297	297	297
TOTAL OPERATING COSTS	9,473	9,031	11,121	9,875
NET DISPOSABLE INCOME	9,255	8,309	7,482	8,349
<u>Plus</u> Rent and Interest	2	96	96	65
NET FARM INCOME	9,257	8,405	7,578	8,414
<u>Less</u> Owner Operator Labour Allowance	3,000	3,000	3,000	3,000
<u>NET \$ RETURN TO CAPITAL</u>				
AND MANAGEMENT	+6,257	+5,405	+4,578	+5,414
<u>RETURN TO CAPITAL (%)</u> (including value of stock)	+15.61	+13.48	+11.42	+13.50
<u>AVERAGE TOTAL CAPITAL</u>	\$40,083 including stock excluding one house			

Table B12

FINANCIAL RESULTS

FARM "Y", YOUNG

ITEMS	65/66	66/67	67/68	Average 3 years
<u>GROSS INCOME:</u>				
Prunes	} 14,629	16,047	6,671	12,449
Other fruit				
Wool				
Livestock sales	725	-	68	264
TOTAL GROSS FARM INCOME	15,354	16,047	6,739	12,713
<u>Less</u> Cash Operating Costs	9,066	10,109	4,958	8,044
<u>Plus</u> Depreciation -				
Plant	1,005	1,005	1,005	1,005
Structures	120	120	120	120
TOTAL OPERATING COSTS	10,191	11,234	6,083	9,169
NET DISPOSABLE INCOME	5,163	4,813	656	3,544
<u>Plus</u> Rent and Interest	95	868	314	425
NET FARM INCOME	5,258	5,681	970	3,969
<u>Less</u> Owner Operator Labour Allowance	3,000	3,000	3,000	3,000
<u>NET \$ RETURN TO CAPITAL</u>				
AND MANAGEMENT	+2,258	+2,681	-2,030	+969
<u>RETURN TO CAPITAL (%)</u> (Including value of stock)	+6.74	+8.00	-6.06	+2.89
<u>AVERAGE TOTAL CAPITAL</u>	\$33,486 including stock			
<u>INVESTMENT</u>	excluding house			

Table B13

FINANCIAL RESULTS

FARM "Z", YOUNG

ITEMS	65/66	66/67	67/68	Average 3 years
<u>GROSS INCOME:</u>				
Prunes	9,414	9,485	4,434	7,778
Wool	1,129	1,524	1,458	1,370
Sheep sales	241	340	112	231
Wheat	21	-	-	7
Off farm income	1,025	998	858	960
Cattle Sales	388	352	190	310
TOTAL GROSS FARM INCOME	12,218	12,699	7,052	10,656
<u>Less</u> Cash Operating Costs	4,952	5,196	4,755	4,968
<u>Plus</u> Depreciation -				
Plant	1,245	1,245	1,245	1,245
Structures	141	141	141	141
TOTAL OPERATING COSTS	6,338	6,582	6,141	6,354
NET DISPOSABLE INCOME	5,880	6,117	911	4,302
<u>Plus</u> Rent and Interest	122	198	454	4,302
NET FARM INCOME	6,002	6,315	1,365	4,560
<u>Less</u> Owner Operator Labour Allowance	3,000	3,000	3,000	3,000
<u>NET \$ RETURN TO CAPITAL</u>				
AND MANAGEMENT	+3,002	+3,315	-1,635	+1,560
<u>RETURN TO CAPITAL (%)</u> (including value of stock)	+8.22	+9.08	-4.47	+4.30
<u>AVERAGE TOTAL CAPITAL</u>	\$36,504 including stock			
<u>INVESTMENT</u>	excluding house			

APPENDIX C

Cultural Practices

C.1 IRRIGATION WATER AND PRACTICES M.I.A.

(1)

An average of 2 acre-feet per acre per annum of irrigation water is applied to most M.I.A. horticultural farms. This together with annual average rainfall would bring total water applied to 39.95 inches, assuming that rainfall was evenly spread.

In drier years growers will use more than 2 acre-feet per annum.

Growers interviewed applied on average (with one exception) from 1.5 acre-feet to 2 acre-feet of irrigation water per annum to prunes, in the M.I.A. This water is applied through a furrow system. The majority of growers cannot tell with any degree of accuracy the amount of irrigation water applied to a particular fruit crop. Generally the whole farm is watered at the same time, although this period will cover several days and nights, depending on farm size.

With furrow irrigation, particularly in hot dry weather, during day light hours there can be considerable water losses through evaporation, as well as seepage losses in supply channels especially in soils with a high sand content. Application efficiency in a furrow irrigation system may decline to as low as 60 to 70 per cent of water applied under certain conditions. In this case more water in feet may be applied to the crops to allow for factors such as high evaporation, excessive seepage, etc.

In most cases water is applied in 2 to 3 inch irrigations, so that the number irrigations may vary from 8 to 12 or more depending on year, farm, etc.

C.2 WATER CHARGES. M.I.A.

On the M.I.A. water is supplied to horticultural farms on the basis of 1 acre-foot per planted acre at \$1.00 per acre-foot, and there after at \$4.80 per acre-foot. In the 1968/69 irrigation season the average amount per acre-foot paid by horticultural farms, over the whole season was \$2.90 per acre-foot. (2) (That is, 1 acre foot at \$1.00 plus 1 acre-foot at \$4.80, average \$2.90 per acre foot).

Young

Irrigation of prunes in the Young area is very much the exception rather than the rule. A few farmers irrigate from dams. One farmer (Farm S) in this study has an irrigation system operating from a dam. It is not large enough to allow him to irrigate his entire orchard, nor apply the amount of water applied by his counter-parts on the M.I.A. Probably he applies about 4 to 6 acre-inches per acre in a season depending on the weather and supply available in his dams. This supply is dependent largely on rainfall and run-off from the surrounding country.

(1) Water Conservation and Irrigation Commission, Leeton, pers. com.

(2) Water Conservation and Irrigation Commission, Leeton, pers. com.

Increased interest is being shown by prune growers in the Young District in the possibilities of irrigating prunes as a means of lifting yields and evening-out fluctuations in year to year production. There is also interest in "drip" or "trickle" type irrigation.

C.3 CULTIVATION PRACTICES M.I.A.

On the M.I.A. it appears normal practice to cultivate after every or every second irrigation. Before irrigation commences, the orchards are cultivated to destroy winter weeds and grasses and furrowing out takes place. Virtually no M.I.A. grower plants a winter cover crop between tree rows. After every cultivation a furrowing out is done to enable irrigation to take place. Chemical weed control was practised partly by one grower in the study. Chemical weed control (with knock down and more residual herbicides may increase, though many growers say that it is too expensive. This is largely due to their attitude to costing cultivation. Also some say they do not feel that are working unless they are on the tractor).

Young

Growers at Young included on average five cultivations in their yearly management programmes. The number of cultivations varies with seasonal conditions and weed growth, and the necessity to conserve available soil moisture.

C.4 PEST AND DISEASE CONTROL PRACTICES M.I.A.

Basic practices in this area of orchard management were similar in each area. However there were variations between growers and between the two areas, in numbers of sprays applied, in types of chemicals used, etc.

In all cases growers stated that they followed the recommended spray programmes for their areas and crop types. However there is little doubt that growers alter the spray programmes according to what they see as the needs of their particular orchards.

It appears that most growers seek a least cost spray programme. This is not necessarily in terms of cheapest available and effective spray type or chemical, but the least number of sprays and amount of spray chemical that can be reasonably expected to both provide control of and protection against the various pests and diseases that attack fruit trees, not only prunes.

This type of operation requires a considerable degree of management skill particularly in determining time of spray application. If the spray is applied too early or too late, then the cost in damage to fruit, loss of fruit, and extra sprays to control the pest, can add considerably to production costs and reduce production.

Many growers appear not to work out spray costs, comparing materials (where alternatives exist) pack sizes, cost per spray applied, and this may well be an avenue where growers could exercise savings. This combined with reasonable management could make a least cost spray programme a reality. The grower must of course be on guard for an abnormal year, e.g. 1968/69 when Rutherglen bugs were in plague proportions and extra sprays were needed.

Only one grower in the study on the M.I.A. used a concentrate sprayer (Farm A). There are certain economics associated with use of concentrate sprayers. However use of concentrate spraying for scale control (especially San Jose Scale) does not necessarily give the control desired. Dilute spraying is the recommended practice, particularly in spraying for scale control.

Young

Spray programmes in use on prunes in the Young area are basically the same as those on the M.I.A. Similar practices apply with regard to alternation of recommendations to suit particular growers situations, as is the case in the M.I.A.

Again growers appear to seek a minimum spray programme with similar features and problems to that adopted by M.I.A. growers.

Concentrate sprayers are used at Young. Growers in the Young district, if they believe that seasonal conditions do not auger well for the crop may reduce or in some cases discontinue their spray programme to save cash expenses. Production at Young being entirely dependent on natural rainfall can suffer considerable fluctuations, whereas in the M.I.A. irrigation replaces to a large extent the dependence on natural rainfall.

C.5 FROSTS AND HAIL

Frosting occurs in both areas. At Young the effects of this natural hazard can be variable due to the spread of the areas around Young. One area may be severely affected by frost whereas one on the other side of Young may not be so hard hit. Area variations are evident in incidence and effects of hail.

C.6 PRUNING PRACTICES M.I.A.

Biennial pruning of prunes is the general practice. However, several M.I.A. growers (Farms A.D.E.F.) do not prune mature or full bearing trees. Preferring to do only some light thinning or "tidying up" should the trees need it. Most prune and/or train young or non bearing trees till they reach full production. This means of training is to use ties or tapes around the trees to keep branches shaped upwards. These ties may be nylon tape or fencing wire.

Young

Biennial pruning was the established practice of all growers in the study at Young. All prune half their trees each year; in effect pruning each tree every second year.

This practice (1) as well as shown to increase yields has reduced pruning costs, particularly in the Young area where richer larger acreages of trees are involved than on the M.I.A.

Although the actual cost of employed labour for pruning has not declined, in fact has probably risen, a reduction in total pruning has assisted in reducing production costs.

(1) Departmental Pamphlets.

C.7 TREE REPLACEMENT POLICIES YOUNG.

Many orchards at Young have trees of the variety Robe de Sergeant interplanted with trees of the D'Agen variety. It was thought when the orchards were first established and for some years after that the Robe variety was necessary for cross-fertilization purposes. This was later found to be unnecessary. Over the years some growers have removed these trees and planted D'Agens in their place. On most farms cases total Robe plantings amount to between 1 and 10 acres, but because they are interplants problems arise.

In view of the Marketing situation, i.e. a separate pool for Robes in 1970, some growers are either removing Robes or reworking them to D'Agens. Reworking can only be really successful if trees are young and vigorous. It is not worthwhile if trees are very old and/or unhealthy.

In general the tree replacement policy is to replace individual dead or very unhealthy trees of either variety with young D'Agen trees as vacant spots become apparent. Two growers reported that they replaced whole blocks (1) of prune trees when necessary rather than individual trees, (Farms S and X). The rest replaced individual trees.

This practice of replanting individual trees leads to varying age patterns in blocks, and varying stages of production. There are problems associated with this particularly if the age range is large.

Many growers would not have the capital available to remove and replant large numbers of trees. Nor in many cases would there be sufficient income from other sources to maintain them until the trees came into full production, 10 to 12 years time when they could expect increased production.

This policy reflects their uncertainty about the future of the industry particularly under dryland conditions. Also their need (and desire) for some income now rather than perhaps an increased income at some future date.

Prune trees take from 10 to 12 years to reach full production, under dryland conditions. This may vary with prevailing seasonal conditions. Adverse seasons may extend the period that it takes for the trees to reach full production.

M.I.A.

Large numbers of Robe variety interplants are not present in the M.I.A. If present at all Robes tend to be planted in separate blocks.

In the M.I.A. there appears to be a more definite practice of crop rotation and replacement. Growers will remove blocks of trees they consider uneconomic and replant to some other fruit type or plant new prune trees.

Most M.I.A. growers at anyone stage appear to have some land that is either out of production i.e. waiting to be replanted, or at the non-bearing stage, or not in full production. Under irrigation trees may not have as long a total bearing life as under dryland conditions, perhaps due to drainage problems, root rots induced or aggravated by the use of irrigation, and inadequate drainage. However there is some question as to whether allowing a tree to grow to a great age is a sound decision.

(1) "Blocks" can vary greatly in size, according to definition. Here is refers to one acre or more of trees. When the industry was first established each farm had 9 acres of prunes and this was referred to as a block.

Prunes trees reach full production on the M.I.A. at between 5-7 years depending on seasons and management. This is 5-7 years earlier than trees in the dryland production area of Young.

However some M.I.A. growers do have a one tree type replacement policy.

M.I.A. growers on the whole with their greater number of enterprises (i.e. other fruit) may be better able to afford to replace larger numbers of trees at one time than Young growers.

Growers in both areas were asked specific questions at the interview as to replacement or replanting policies. In virtually all cases death and/or extreme ill health of tree was the reason for its removal. A low production record of a tree or block of trees was given as a reason for removal by some.

C.8 FERTILIZER PRACTICES M.I.A.

General phosphate source on most farms in 22% Superphosphate applied at between 4 to 5 cwt per acre per year. On one farm it was only applied to fully bearing trees, non bearing trees receiving little or no fertilizer.

Nitrogen is generally applied in form of Calcium Ammonium Nitrate 20.5%N or Sulphate of Ammonia 21.5%N. Application rates were generally quoted as lb. product per tree. Nitrogen is applied at a different time to phosphatic fertilizers and sometimes a split application of N is used.

Young

Farm W grows winter cover crop which is turned in (generally oats) as a green manure crop.

Phosphate is applied in the form of 22% superphosphate, but a lower rate than in the M.I.A. about 1 to 2 cwt per acre. Several growers used N-P mixtures either alone or with superphosphate. Nitrogen is applied either in the mixed fertilizer form or in a straight N form such as calcium ammonium nitrate. Application rates are lower than on the M.I.A.

C.9 HARVESTING PRACTICES YOUNG

On all farms some means of shaking the fruit onto the ground was utilized. One or two used an attachment to a chain saw which is used to vibrate the limbs. Others used "shepherds crooks" type shakers - of steel or wood, which are hooked over a branch and hand shaken. Often fruit was shaken onto a hessian mat to facilitate picking up and reduce contamination of fruit with dirt, etc.

Growers used boxes or tins and pickers filled these and in virtually all cases labour was paid on a per tin or box basis.

In most cases these tins or boxes were carted to the dehydrator or cooperative, and no form of bulk handling, as seen in the M.I.A., had been introduced at the stage when the author was in the Young area.

Demonstrations have been made of a U.S. developed tractor mounted hydraulic shaker on several district farms. This implement shakes the whole tree by attaching itself to the butt of the tree. It shakes onto hessian or canvas. The hession is then picked up and the fruit emptied into a bulk bin. It would be doubtful economics to use this costly machine to shake and then pick up in the conventional manner.

M.I.A.

Similar practices and implements were used in the M.I.A. as seen at Young. Most growers using tins for picking up and using either mechanical chain saw or hand shaking implements.

Bulk handling is being developed to a much greater extent than at Young. The major co-operative dryer, Griffith Producers, will eventually convert to a complete bulk handling system.

Demonstrations of this tree shaker mentioned previously were also made by the manufacturers - distributors in the M.I.A. area.

C.10 DEHYDRATION PRACTICES
YOUNG

The Young group of growers had the following dehydration arrangements:

- 1 grower used contract drying.
- 3 had on farm dehydrators
 - 1 (one) of whom used the cooperative system for part of his crop in heavy crop years.
 - 3 used the cooperative system.

Total 7

The Cooperative System at Young

The cooperative (Young District Producers Cooperative Society) at Young has three district dehydrators (Kingsvale, Maimuru and Wirrimah) rather than one central dehydrator. This is partly because of the distance involved to a central point, i.e. Young, and industry establishment before the development of adequate road transport systems.

These dehydrators are largely the original structures although they have been renovated and updated over the years.

Each grower is assigned a delivery quota to the dehydrator, on a tray or quantity of fruit per day basis. This quota will vary with growers' crop size.

To maintain fruit quality some growers coolstore fruit, i.e. all fruit is picked, coolstored and then delivered to the dehydrator as per quota. It is claimed that coolstoring maintains fruit size by retarding fruit shrinkage due to natural dehydration. It also allows growers to pick the entire crop at one time rather than pick over an extended time period in line with dehydrator quotas, thus avoiding fruit loss on the trees.

M.I.A.

The M.I.A. group of growers had the following dehydration arrangements.

	4 growers had their own dehydrators.
	2 growers used cooperative facilities.
Total	<u>6</u>

Cooperative Dehydration on the M.I.A.

Griffith Producers Cooperative Ltd. is the major cooperative drying organisation.

Quotas are allocated to growers for delivery of fruit to the cooperative dehydration facilities.

Each grower has an individual conversion ratio struck for his crop for fresh to dry fruit. This is made on the basis of fruit moisture content, length of drying time, sugar content, etc. Charges are made on this basis for an individual's crop. An average is struck for the whole season but a grower will pay on the rate determined for his fruit.

In wet years fruit generally has a much higher moisture content and this will raise the charges. Low throughput for a season (small total crop) raises the fixed or overhead portion of the charges.

Charges for dehydration are generally made on a fresh fruit basis, and when multiplied by the conversion ratio gives the dry ton cost equivalent.

Robe de Sergeant variety prunes tend to have a higher conversion ratio than D'Agen variety and consequently cost more per ton for dehydration. Also Robes require more careful handling due to the relatively thin skin characteristic of this variety.

Growers pay a levy on fruit processed (dried) through the cooperative facilities. This is deducted from payments and allocated to shares, the money from which is used to finance further development.

C.11 ON-FARM DEHYDRATION - BOTH AREAS.

Every dehydrator is inspected and registered with the Dried Fruits Board. Certain health and hygiene standards must be maintained, for a dehydrator to remain registered.

Most dehydrators are oil fired using heavy fuel oil. Some were old wood systems converted in later years to oil. There are two major forms, parallel flow and centre flow dryers. It is not intended to argue the comparative merits of either one.

On all on-farm dehydrators the major part of the work is done by the owner operator and/or his family. Some labour may be employed for various aspects of the operation, e.g. filling and scraping trays, but the owner operator does the major part of the work, especially the night work. Dehydrators once started generally run round the block until the drying is complete.

Growers maintain that on-farm dehydration is cheaper and more convenient than using contract or cooperative facilities. It does allow growers to organise harvesting to the capacity of their dehydrator. The capacity of their dehydration plant determines a drying quota particularly in a heavy year.

C.12 CARTAGE
YOUNG

Growers cart prunes to the dehydrator themselves or employ a contractor. Those using cooperative dehydration facilities would be unlikely to use contract as fruit is taken in comparatively small quantities to the dehydrator each day.

M.I.A.

Virtually the same as for Young. Growers selling to private buyers cart to nearest railhead. These growers tend to store their dried prunes (as they do at Young) until the end of the season and then cart to point of sale, either the cooperative or nearest railhead for the private buyer.

Farm	Irrigation Amount No.	Cultivation	Pruning	Fertilizer	Sprays	Tree Replacement (Reason)	Dehydration	Sale	Cartage	Spray type
A M.I.A.	2ac.ft.10	After every second irrigation 5 cult. 5 furrowing out.	Prune to 7-8 years not mature trees.	Super Sulphate 2 cwt/ac. Every year	1 x Scale (oil) 2 x Rust (Tedion and Zineb).	Individual trees Death of trees	On farm	Cooperative Private Buyers	Self to cooperative and railhead	Concentrate
B	1.5ac. ft.10	After every second irrig. 5 cult. no furrowing out border check system	Biennial ($\frac{1}{2}$ every year)	5 cwt/ac Super-Autum 4 cwt/ac Sulphate of Ammonia. Spring every year.	1 x Scale (oil) 3 x rust (Zineb) 1 x Mite Spider (Dicofol)	Whole blocks Production record tree health and appearance	Cooper- ative	Cooperative	Self to Cooperative	Dilute
C	3ac.ft.9	After every third irrigation 3 cult. 3 furrowing out some chemical weed control	Biennial	6 cwt/ac mixed fertiliser winter. 6 cwt/ac sulphate of ammonia. Spring every year.	1 x Scale (oil) 2 x Rust 2 x Red Spider (Dicofol)	Whole blocks at 25-30 years old. Rotation of crops.	On farm	Cooperative	Self to cooperative	Dilute
D	1.5ac. ft.16	After every 2nd irrigation 8 cult. 8 furrowing out.	Odd thinning only	P.B. 10 10lb./tree Sulphate of Ammonia 6lb./tree Superphosphate 7lb./tree. Potash 11lb./tree every year.	1 x Scale (oil) 3 x Rust (Zineb)	Individual trees Age of trees and death.	On farm	Private	Self to railhead	Dilute
E	2ac.ft.8	After every 2nd irrigation 4 cult. 4 furrowing out.	Only thinning occasionally	Sulphate of Ammonia 6lb./tree every year.	1 x Scale (oil & Linesul) 1 x Red spider (Dicofol) 1 x Rust (Zineb)	N.A.	On farm	Private	Self to railhead	Dilute
F	1.5ac. ft.9	After every irrigation 9 cult. 9 furrowing out.	Non bearing trees only	4 cwt/super/ac Calcium Ammonium Nitrate 2 lb/tree Bearing trees only.	1 x Scale (oil) 1 x Rust (Tedion and (Zineb).	Whole block age death ill health.	Cooper- ative	Cooperative	Pickers cart to weigh-bridge.	Dilute

Farm	Irrigation Amount	Cultivation	Pruning	Fertiliser	Sprays	Tree Replacement (Reason)	Dehydration	Sale	Cartage	Spray Type
R	Nil	5	Biennial (½ every year)	1 cwt Super/ac 3 cwt. 20.11.0/ac every year	1 x Scale (oil and lime sul) 1 x Brown Rot (Difolotan) 1 x Rust and Miteicide (Zineb and Dicofol) 1 x Rust (Zineb)	Individual trees death of trees	On farm	Cooperative	Cooperative collect and cart.	Dilute
S	6 acre inches	5	Biennial (½ every year)	3 cwt/ac 16.16.8	1 x Scale (oil and copper) 3 x Rust (Zineb) 1 year in 2 1 x Mite (Dicofol)	Whole block death of trees	On farm	2/3 to cooperative	Self to cooperative and railhead	Dilute
T	Nil	5	Biennial (½ every year)	1 cwt/ac Super Autumn 1.5 lb/tree Calcium Ammonium Nitrate Bearing to trees only	1 x Scale (Oil and Lime sul) 2 x Rust (Zineb) 1 x Brown Rot (Captan)	Originally replaced large part of orchard and established new area	On farm	Private	Contract cartage to point of sale	Concentrate
W	Nil	5 and sowing cover crop for winter	Biennial (½ every year)	1 cwt super ac. sowed with cover	1 x Scale (oil and copper) 2 x Rust (Zineb) 1 x Brown Rust (Captan)	Individual trees Death maintain existing acreage	Cooperative (fruit cool store on farm prior to dehydration)	Cooperative	Self to cooperative dehydration	Concentrate
X	Nil	5	Biennial (½ every year)	200 lbs/ac 20.11.0	1 x Scale (oil) 1 x Rust and Mites (Zineb and Dicofol) 1 x Zineb	Whole block production and health	Cooperative (Coolstores fruit in cooperative coolstore in Young prior to dehydrator not every year)	Cooperative	Self to coolstore and back to dehydrator	Concentrate
Y	Nil	5	Biennial (½ every year)	2 cwt/ac 20.11.0 every second year	1 x Scale (oil) 3 x Rust (Zineb) 1 x Mite (Dicofol)	Individual trees death of trees	Contract	Private	Self to dehydrator and then to railhead	Concentrate
Z	Nil	5	Biennial (½ every year)	1.5 cwt/ac superphosphate 1.5 cwt/ac calcium ammonium nitrate	1 x Scale (oil) 3 x Rust (Zineb)	Individual trees death of trees did replant recently old other fruit blocks	Cooperative	Cooperative	Self to cooperative dehydrator	Dilute