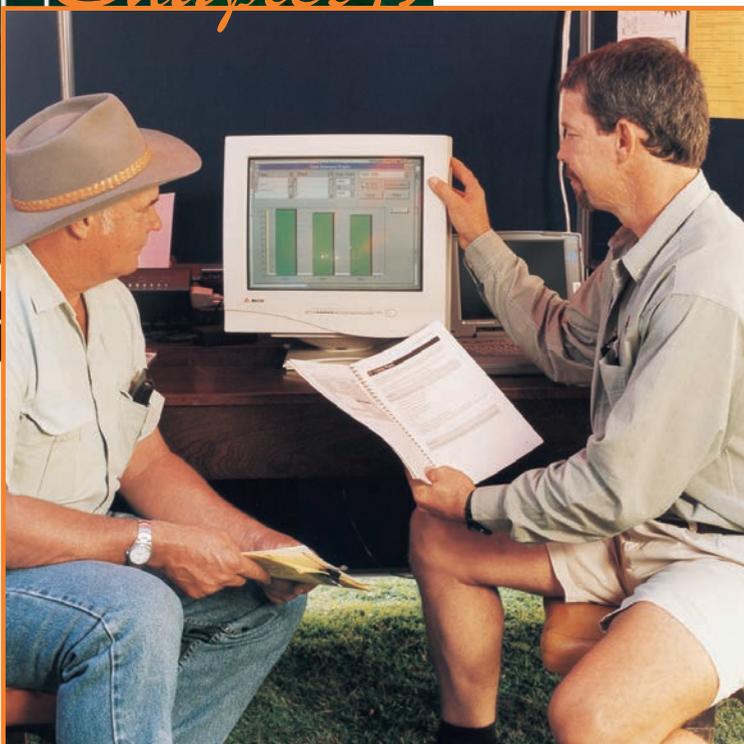
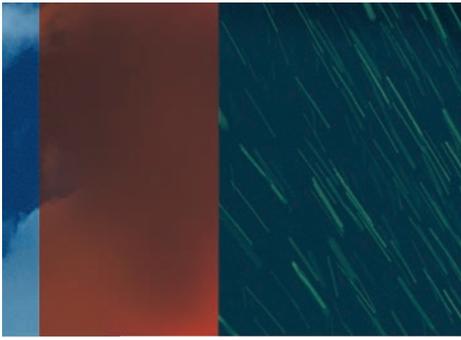




## Chapter 19





## FARM BUSINESS MANAGEMENT

Peter McGuire

### FARMING AS A BUSINESS

*'Farming is the only business where you buy at retail prices, sell at wholesale prices and pay the freight both ways'*

John F Kennedy

**FARMERS are multi-skilled; they need to be. As farm managers, they make daily decisions about what to plant, when to irrigate or spray, and how much fertiliser to apply. As farm business managers, they also make decisions such as 'Should I buy or lease a new tractor? How many ratoons will maximise my profits? Have I sufficient reserves to withstand a period of low prices? Should I expand? When and how do I hand over to the next generation?'**

Cane farms represent a large capital investment, often with a turnover of several hundred thousand dollars. Research shows that the most profitable farms often have similar costs per hectare to less profitable farms. What difference does good management make?

Farm business management has become increasingly important since deregulation of the sugar industry. It is about having the skills and information to make the best decisions.

Information comes from financial and technical advisers and from the farmer's own records and experience. Whether good decisions turn out to be right decisions often depends on factors outside the farmer's control, such as weather or interest rates. However, sound farm business management will minimise the adverse effects of these external factors.

During the 20th century, many cane farmers were able to rely on expansion to

## MANUAL OF CANEGROWING

increase or maintain profits. Most districts have now reached the limits of expansion. Farm business management is one way for farmers to maintain profitability by fine-tuning their farming business.

### MEASURING AND CHANGING PROFIT

Profit is defined as income minus expenses; it is what is left after paying the bills. Income is relatively straightforward, but expenses fall into one of three categories: overhead, variable or capital expenses. While many expenses have both an overhead component and a variable component (e.g. fuel for the utility is an overhead; fuel used by the tractor is a variable cost), it is easiest to classify them according to their major effect on profit.

#### Overhead expenses

Overhead expenses do not vary greatly with the level of production. They are sometimes called 'fixed' expenses. However, 'fixed' implies that they can not be changed. Adding a second telephone line for the fax machine increases overheads, so obviously they are not 'fixed'. Some examples of overhead expenses are insurance, rates, lease payments, interest, office expenses (including telephone and fax), and permanent labour.

Overhead expenses also include the non-cash expense of depreciation. Depreciation is usually a major cost in farming. Depreciable items on a typical cane farm include sheds, tractors, implements, irrigation plant and farm vehicles. For an investment in

equipment with a market value of \$150 000, depreciation may be \$10 000 to \$15 000 per year. Depreciation allowed for taxation purposes may be higher.

#### Variable expenses

Variable expenses are those expenses that vary with the level of production. For example, doubling the area under cane means that fertiliser costs will double. Variable expenses include harvesting, levies, fuel, electricity for irrigation pumping, fertiliser, repairs and maintenance, pesticides, and casual labour.

#### Capital expenses

Capital expenses include purchasing land or machinery and major farm improvements, such as earth moving and clearing. These items are not included when calculating profit and loss.

#### Determining profit

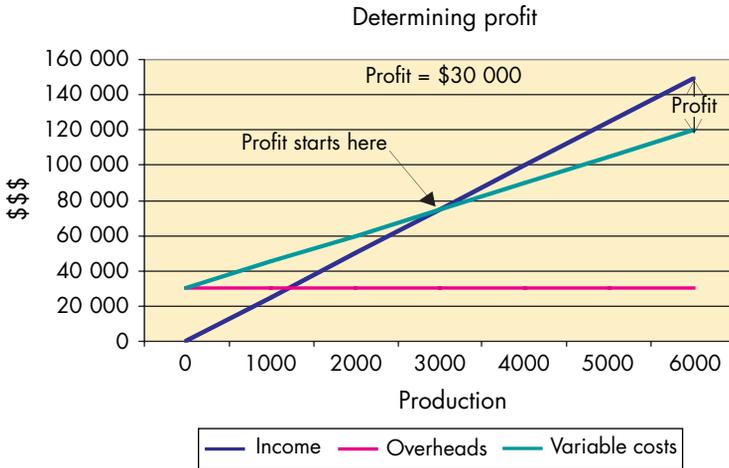
Profit = Income - (variable costs + overhead costs)

Which of these things (income, variable costs or overheads) affects profit most? The answer is, of course, 'It depends'. For a farm with very high overheads (large lease payments, depreciation or interest payments), reducing overheads will have a large impact on profit. If variable costs are high, increasing production will only increase profit by a small amount. The following examples show the relationship between income, cost type and profits.

**The Toilers**

Tom and Mary Toiler grow 6000 tonnes of cane. Their costs of growing cane are:

- overhead expenses of \$30 000 per year, excluding owners' labour;
- variable expenses of \$15 per tonne.

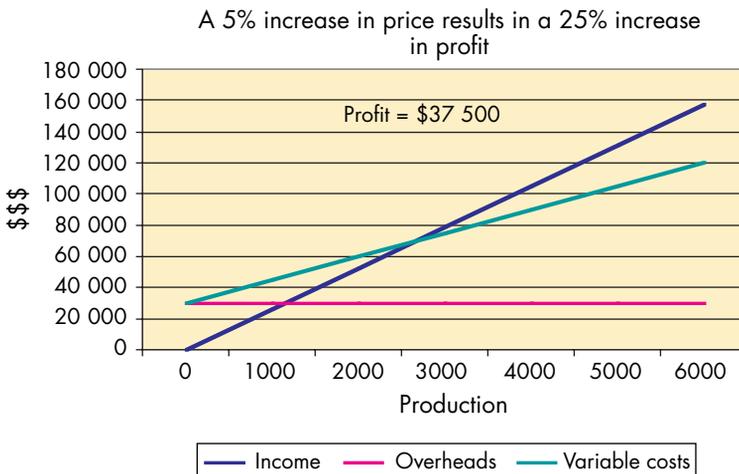


At a cane price of \$25 per tonne, their profit is \$30 000 on which the family needs to live. Other costs and income should be ignored, as they do not 'belong' to the farm business.

If Tom and Mary grew no cane for a year, they would still have to pay overhead costs so the loss would be \$30 000. If they grew 3000 tonnes, they would break even. So their 'break even point' is 3000 tonnes. Each tonne produced above 3000 tonnes results in \$10 of profit (price of \$25-\$15 costs).

**Increasing cane price by 5%**

- Overhead expenses of \$30 000, excluding owners' labour;
- Variable expenses of \$15 per tonne;
- cane price = \$26.25 per tonne.



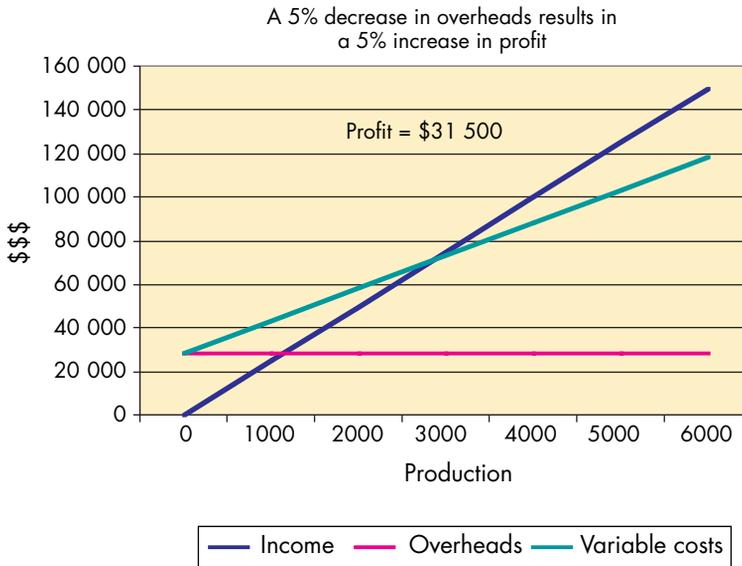
In this case, a small rise in the price of cane (\$1.25 per tonne) gives a large increase in profit. This is because all the increase in income is reflected in profit, while costs remain the same. (A decrease in price has an equally dramatic effect.) The breakeven point is now 2667 tonnes with each tonne contributing an additional profit of \$11.25.

The price of sugar is outside the control of growers, but they can influence the price of cane. At a sugar price of \$300 per tonne, an increase of one unit of CCS is worth an additional \$2.70 per tonne of cane under the Queensland cane payment formula. One third of a unit will increase the price by \$1 per tonne.

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**Reducing overhead costs by 5%**

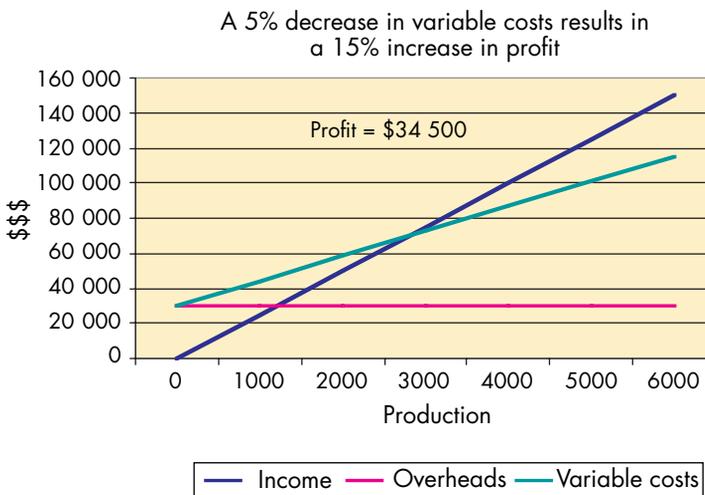
- overhead expenses of \$28 500 per year, excluding owners' labour;
- variable expenses of \$15 per tonne;
- cane price = \$25.00 per tonne.



When overheads are relatively small compared to gross income (20% of gross income in this case), reducing overheads will not have a dramatic effect on profit.

**Reducing variable costs by 5%**

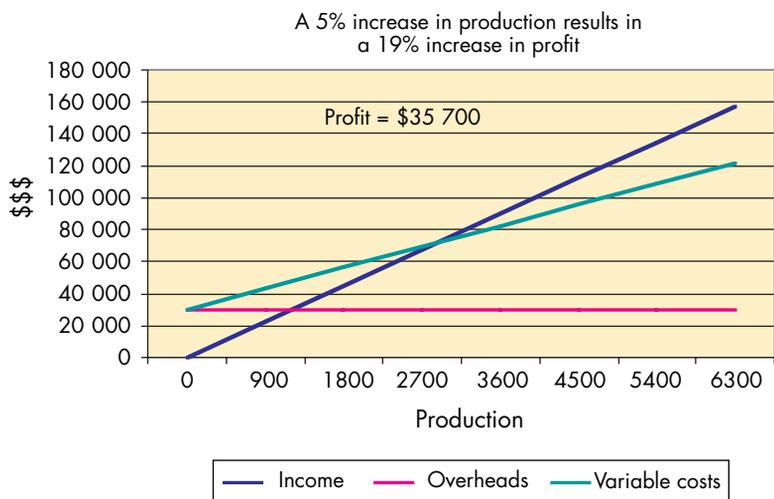
- overhead expenses of \$30 000 per year, excluding owners' labour;
- variable expenses of \$14.25 per tonne;
- cane price = \$25.00 per tonne.



Decreasing variable costs by a small amount has a significant effect on profit. In this example, the break even point has reduced to 2790 tonnes, with each additional tonne contributing \$10.50 to profit.

**Increasing productivity by 5%**

- overhead expenses of \$30 000 per year, excluding owners' labour;
- variable expenses of \$14.60 per tonne;
- cane price = \$25.00 per tonne;
- **production: 6300 tonnes** (no increase in area).



If the Toilers increase productivity by 5%, they will incur extra harvesting costs. However, if the per hectare costs such as irrigation, fuel and herbicides remain the same, then total variable costs are 'shared' by more tonnes resulting in a lower cost for each tonne. The result here is a 19% increase in profit.

The increase in profit is only 19% because harvesting costs and levies (\$6 per tonne) make up 40% of the variable costs. As production rises, so do harvesting costs, even though other variable costs remain the same. It is important to distinguish between costs which vary per hectare and those which vary per tonne.

**So how can farmers improve profits?**

Profit can only be improved by increasing income (production and price) or by reducing costs (overheads and variable costs). Some strategies to consider are:

**Income**

To increase income, improve yields by ensuring irrigation, drainage, weed control and crop nutrition are optimised. Select varieties to maximise sugar per hectare. Harvest varieties at the right time to maximise CCS, consider leasing/buying more land and consider contracting (if equipment and time are appropriate), e.g. fertilising, ripping, planting.

**Overheads**

To reduce overheads, ensure that the best interest rates are obtained for the situation, dispose of unnecessary equipment or share

equipment with neighbours (or use a contractor).

**Variable costs**

To reduce variable costs, soil test to determine fertiliser needs, minimise tillage operations to reduce fuel and repair costs, and reduce herbicide rates by spraying weeds when they are small.

**Costs per tonne or per ha?**

Overhead costs are costs that relate to the whole farm. Expressing them on a per tonne basis makes little sense, as these 'fixed' costs will vary per tonne as production goes up or down. Showing them on a per hectare basis does allow comparison between farms.

Most variable costs are incurred on a per hectare basis and should be expressed this way.

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Consider two neighbours:

	Smith	Jones
Cane area (ha)	100	100
Yield (t/ha)	110	80
Total growing costs	\$100 000	\$100 000
Growing costs per ha	\$1000	\$1000
Growing costs per tonne	\$9.09	\$12.50

Is Jones's problem high growing costs or low production?

Harvesting costs are different. They are incurred per tonne so it makes sense to express them this way.

**Which hectares—harvested or cultivated?**

The area cultivated for cane is the basis for the cane business. That should also be the basis for reporting profit. Using the harvested area to report profit gives an inflated result and makes comparison between farms difficult.

Cultivated area (ha)	120
Area harvested (ha)	100
Yield (t/ha)	90
Total growing costs	\$100 000
Overheads	20 000
Harvesting costs per tonne	6.00
Cane price	\$25.00
<b>Profit:</b>	
	\$425
	\$510
	per cultivated ha
	per harvested ha

**Opportunity cost**

Opportunity cost is the opportunity or return that is 'sacrificed' when making a purchase or investment. When buying a new tractor for \$80 000, the opportunity cost is the return not received by investing that money in say, a long-term deposit. If the long-term deposit is returning 6% pa, then the opportunity cost in buying that tractor is \$4800 per year. That does not make the tractor any less essential, but it does add to the cost of owning and operating it.

If the stock market has given an average return of 12% for the past 5 years, is 12% the

opportunity cost? Not really. Because a tractor is a 'safe' investment, it must be compared to investments with similar risk, e.g. long-term bank deposits or government bonds.

**KEEPING RECORDS FOR THE FARM BUSINESS**

Good records turn data into information. A good record system will provide the information necessary to make decisions that lead to better management and profitability. Preparing a budget for planning purposes or for a loan application is easier and more accurate, if it is based on existing records.

Adequate records need to be kept for tax purposes. If an accountant is provided with a clear and accurate financial statement for the farm, much of the mundane work involved in preparing a tax return is removed. It allows the accountant to act as an adviser and not just as a tax agent.

**Computer or manual records?**

While manual records can provide adequate information, they require much more time to maintain and use. Good farm records can be kept on the most basic of computers. Retrieving information in the form of reports is very much faster with a computer-based system and the arithmetic is always correct.

Suitable farm records provide the information to help answer the following questions: How much does it cost to grow a plant crop? How much does it cost to grow a ratoon crop? How much will minimum tillage save? How many ratoons should be grown to maximise net returns? What is the gross margin per hectare?

**Financial records**

There is a wide range of computer software available, which is suitable for keeping farm financial records. The Quicken® program is an inexpensive computerised cashbook that is both simple to learn and use (Figure 1). MYOB® (Mind Your Own Business) is a full

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accounting package designed specifically for small business.

An accountant should be consulted before a program is set up. Among other things, an accountant can provide a 'chart of accounts' used in maintaining the records. The chart of accounts is a list of income and expense categories. For tax purposes, some expenses are grouped, e.g. fertiliser and chemicals. Most programs allow categories to be split into sub-categories so that records can meet the needs of both the farmer and the accountant. When choosing a financial recording package, it is important to choose one that allows identification of income and expenses from different enterprises, e.g. cane and cattle.

Income and expense categories will vary from farm to farm but the list in Table 1 should be useful as a guide.

Financial records must be accurate. They are used to make management decisions and to prepare tax returns. The only way to ensure financial records are accurate is to reconcile them against bank statements. Records should be reconciled each month. All accounting and cash book programs provide a reconciliation facility.

At the end of each month, farm records show an account balance reflecting all the transactions *that have been entered*. The closing balance on a bank statement is based on transactions that *the bank has processed by the statement date*. The two balances rarely agree. This is because the bank statement will have items not yet recorded (bank charges, interest) and records will have items which have not yet appeared on the bank statement (cheques not presented or cleared).

Date	Chq No	Payee / Category / Memo	Payment	Clr	Deposit	Balance
1/09/99		Opening Balance [FARM ACCOUNT]	3,342.75	R		-3,342.75
3/09/99	23566	ELECTRICITY BOARD ELECTRICITY Shed meter	74.60	R		-3,417.35
3/09/99	23567	DEPT OF TRANSPORT REGISTRATION Landcruiser registration	425.00	R		-3,842.35
10/09/99		CASH WITHDRAWAL DRAWINGS Cash	500.00	R		-4,342.35
10/09/99	11072	COLES STORES DRAWINGS Groceries	143.75			-4,486.10
10/09/99	23568	ACME RURAL SUPPLIES REPAIRS, SPARES Boom spray parts & nozzles	68.45			-4,554.55
13/09/99		CANE PAY --Split--		R	10,562.50	6,007.95
15/09/99		QIDC LOAN INTEREST Sept interest payment	355.00			5,652.95
17/09/99	23569	QUICKFIX MACHINERY CO REPAIRS, SPARES Harvester parts	237.85			5,415.10
17/09/99	23570	GROW FORCE HERBICIDES Drum Round Up	246.05			5,169.05
18/09/99	23571	ACME RURAL SUPPLIES --Split-- AUGUST ACCOUNT	3,786.45			1,382.60
30/09/99		CASH DEPOSIT OTHER INCOME Rental recd from J Smith			160.00	1,542.60
30/09/99	23572	FEDERATION INSURANCE INSURANCE Farm insurance	685.00			857.60
			<b>Current Balance:</b>	\$0.00	<b>Ending Balance:</b>	\$357.60

Figure 1. Programs such as Quicken® provide all the detail needed for farm financial records.

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**Table 1.** Income and expense categories.

Income categories	Expense categories	
Asset sales: machinery	Administration: bank charges	Insecticides, nematicides
Asset sales: miscellaneous	Administration: postage	Interest payments
Asset sales: vehicles	Administration: stationery	Levies
Fuel, oil: diesel rebate	supplies	Loan capital repayments
Gross cane pay	Administration: telephone and fax	Penalties at mill
GST rebate	Asset purchases: capital items	Plants & seeds purchased
Interest received	Cane penalties	Protective clothing
Loans received	Drawings: income tax payments	Rates
Other income	Drawings: medical expenses	Registration: farm vehicles
Rent received	Drawings: private expenses	Rent paid
Sale of cane plants	Drawings: private insurance	Repairs & maintenance: farm buildings
Sale of other crops, etc	Electricity: general farm use	Repairs & maintenance: irrigation
Wages received	Electricity: irrigation	Repairs & maintenance: machinery
	Farm insurance	Repairs & maintenance: tools
	Fertiliser: lime, gypsum	Superannuation: owner
	Fertiliser: mill mud, dunder	Superannuation: employees
	Fertiliser: mixtures, straights	Tax: fringe benefits tax
	Fuel & oil: general	Tax: government debits tax
	Fuel & oil: irrigation	Tax: income tax
	Fungicides	Wages casual
	Group tax payments	Wages permanent
	GST	Water charges
	Harvesting costs	Workers compensation
	Herbicides	

### Physical records

Physical records, such as cane yield, number of ratoons, and CCS, will assist in selecting the most profitable varieties for the farm. Yield information can also indicate problems in certain fields. Keeping soil analysis records helps build up a picture of how well soil fertility is being maintained.

Essential records to keep are:

- Cultivated area (assigned area);
- Harvested area;
- Block areas;
- Variety and crop class by block;
- Cane yield for each block;
- CCS for each block;
- Time of harvest;
- Mill CCS when each block is harvested;
- Sugar price and cane price;

- Harvesting cost and levies;
- Fertiliser applied;
- Lime, mill mud, dunder, etc., applied;
- Herbicide applications;
- Irrigation—amount and timing;
- Soil and water analysis results;
- Capital works, e.g. land grading.

These records allow farmers to calculate and compare **gross returns** from each block. Recording the number of cultivations and the price of inputs such as fertiliser and herbicides allows calculation of a **gross margin** for each block. Gross margin shows how much each block and variety is contributing towards farm profitability.

The Caneman® program records all of the above items and comes with a large range of standard reports and graphs (Figure 2).

## FARM BUSINESS MANAGEMENT

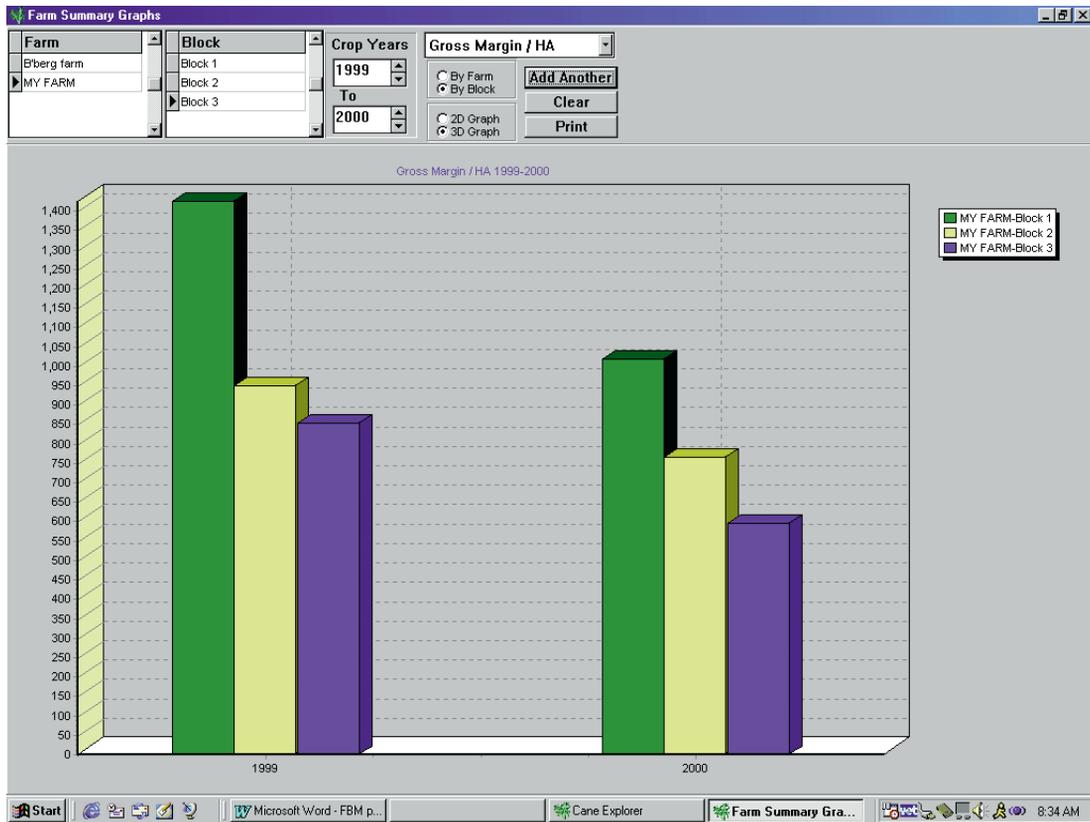


Figure 2. Comparing the gross margins from different blocks.

### THE FARM OFFICE

The purpose of the farm office is to allow processing of accounts and to record, store and retrieve the information needed to run the farm effectively. The basic requirements for a good office are a sizeable desk, laminated farm map, telephone, filing cabinet, and a computer with a printer. Equipment such as a fax machine, photocopier and modem may also be worthwhile.

A well set-up office allows managers to make office work quicker and easier. It allows farmers to print cheques after recording the details on the computer (cheques suitable for office printers are available from most banks), use Internet or phone banking where possible, and pay bills

directly using EFT (electronic funds transfer). Home and small business accounting packages are available with these features.

Farm management information is available over the Internet and on CD-ROM. The farm office is the link to these services.

### BUDGETING FOR PROFIT

A cash flow budget is a forecast of income and expenses. It shows where the farm is going financially, how it will get there, and any cash flow problems that are likely to arise.

A well thought-out annual cash flow budget will show the anticipated cash position at the end of the 12-month period. Income and expenses with cane farming are

## MANUAL OF CANEGROWING

'lumpy'; they do not occur evenly through the year. Budgeting on a monthly or quarterly basis (Figure 3) shows when cash reserves are highest and when an overdraft may be needed.

For planning major purchases (e.g. more land) or to know where the business is headed in the longer term, preparing a 5- or 7-year budget will help. Writing a plan often helps clarify ideas. It also provides a physical document to consult or review as appropriate.

Financial institutions insist on a budget to ensure that borrowers are able to meet their loan obligations. Having a good set of farm records and preparing a comprehensive budget with an accountant will help gain the confidence of the lender. As loan interest rates vary according to the risk perceived by the lender, a well-prepared loan application will assist in obtaining a lower interest rate.

### The budgeting process

Uncertainty is not an excuse to avoid preparing a budget. Yields or prices cannot be estimated precisely, and major machinery expenses can come without warning. However, most managers do have some idea of what these things are likely to be. If the unexpected happens, the budget should be revised. That will at least show how much the cash flow and profit will be affected.

The following steps will help in preparing a cash flow budget.

#### (1) Estimate income

- Cane income = estimated tonnes × forecast price;

- Add other farm income such as the diesel fuel rebate, sale of other crops or livestock;
- Add off-farm income such as interest, dividends and rent.

#### (2) Estimate expenses

- Start with last year's profit and loss statement. Ignore any 'one-off' expenses.
- Unless farm practices are changing, costs per hectare will be similar to last year.
- Add any major purchases or non-routine expenses.
- Estimate the personal drawings needed.

#### (3) Allocate these incomes and expenses to the month or quarter in which they are *expected* to fall.

The cash flow budget is complete. Now deduct an estimate of depreciation to prepare a profit and loss budget. Again, base this year's depreciation on last year's figure with adjustments for disposal of old equipment and purchases of new equipment.

### Profit and loss budgets

Ending the year with more cash than at the start of the year does not mean the farm has made a profit. Depreciation must be deducted. Depreciation is another cost of operating the business, but it is a non-cash or hidden cost.

Deducting depreciation from the cash flow result will give a forecast profit. If no cash flow budget has been prepared, profit and loss budgets can be based on annual totals rather than monthly totals.

FARM BUSINESS MANAGEMENT

Category View	Q1	Q2	Q3	Q4	Totals
<b>INFLOWS</b>					
ASSET SALES	0	0	0	0	0
GROSS CANE PAY	28000	28000	38000	42000	136000
INTEREST RECD	1200	1100	900	200	3400
LOANS RECEIVED	0	0	0	0	0
OTHER INCOME	600	600	600	600	2400
PLANTS SOLD	0	400	0	0	400
SALE OTH CROPS	0	0	0	2000	2000
WAGES RECD	2500	0	0	0	2500
<b>OUTFLOWS</b>					
ADMIN	-300	-300	-300	-300	-1200
ASSET PURCH	0	-15000	0	0	-15000
DRAWINGS	-5000	-5000	-5000	-6000	-21000
ELECTRICITY	-2000	-1500	-1100	-1000	-5600
FERTILISER	0	0	-2000	-3000	-5000
FUEL & OIL	-500	-500	-1000	-1000	-3000
HARV COST	0	0	-14000	-16000	-30000
HERBICIDES	-200	-200	-1500	-1000	-2900
INSURANCE	0	0	-4000	0	-4000
INTEREST	-2400	-2400	-2400	-2400	-9600
LEVIES	-500	-500	-500	-500	-2000
PLANTS, SEEDS	0	0	-400	0	-400
RATES	0	-1100	0	-1100	-2200
REGISTRATION	-350	0	0	0	-350
REPAIRS, SPARES	-1500	-3000	-1000	-1000	-6500
TAXES	0	-4500	0	0	-4500
WAGES	0	0	-800	0	-800
<b>Total Inflows</b>	32300	30100	39500	44800	146700
<b>Total Outflows</b>	-12750	-34000	-34000	-33300	-114050
<b>Difference</b>	19550	-3900	5500	11500	32650

Figure 3. Quarterly and monthly budgets show cash flows through the year.

**BASING DECISIONS ON RETURNS**

*'Profit is a decision.'* Pita Alexander

How do farmers decide whether to buy another tractor, implement or more land? Will it help increase or maintain profits?

The decision should be based on how the investment will affect the owner's profit and lifestyle.

For simple investments, a partial budget will show whether the investment is more or less profitable than alternative uses of the funds.

**Preparing a partial budget**

EXAMPLE: Decision to purchase a fertiliser box.

Tom Toiler needs to replace his old 2-row fertiliser box. He has been thinking about changing to minimum tillage. His BSES extension officer told him that minimum tillage will not affect his yields but spray costs will increase by \$60 per hectare. A 2-row conventional box will cost \$5500 and a 3-row stool splitter will cost \$11 000.

With partial budgeting, only those costs which will change with the proposal need to be considered.

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Annual costs	2-row conventional box	3-row stool splitter
Cultivation costs per ha	92.00	nil
Fertiliser application cost (includes repairs and tractor costs)	22.10	13.30
Additional herbicide costs	nil	60.00
<b>Total cost per ha</b>	<b>114.10</b>	<b>73.30</b>
Cost over 35 ha of ratoons	3994	2566
Depreciation (over 10 years)	495	990
Extra opportunity cost—\$5500 @ 6%	nil	330
<b>Farm total</b>	<b>4489</b>	<b>3886</b>

Taxation effects have not been included and no cost is allowed for owner's labour.

Buying the 3-row stool splitter and using minimum tillage will save Tom about \$600 per year as well as saving time.

### Dealing with more complex decisions

Other techniques are available for more complex situations:

- Return on Investment (ROI) from profit plus capital gain—suitable for investments that produce steady returns and generate capital gain.
- Internal Rate of Return—used where returns are uneven and more than one capital injection is needed.
- Growth in net worth—compares the balance sheets at the start and end of the proposed investment period.

An accountant will be able to assist with these more complex techniques.

### Risk management

For major decisions, the outcomes usually cannot be guaranteed. Investing in new irrigation equipment may turn out to be the *correct* decision, if it is followed by 5 years of drought. If it is followed by 5 wet years, it may have been a *wrong* decision. External factors may dictate whether decisions are right or wrong. It is the farm manager's job to make a *good* decision based on the information at hand. A 'decision tree' can help identify the risks involved in major decisions.

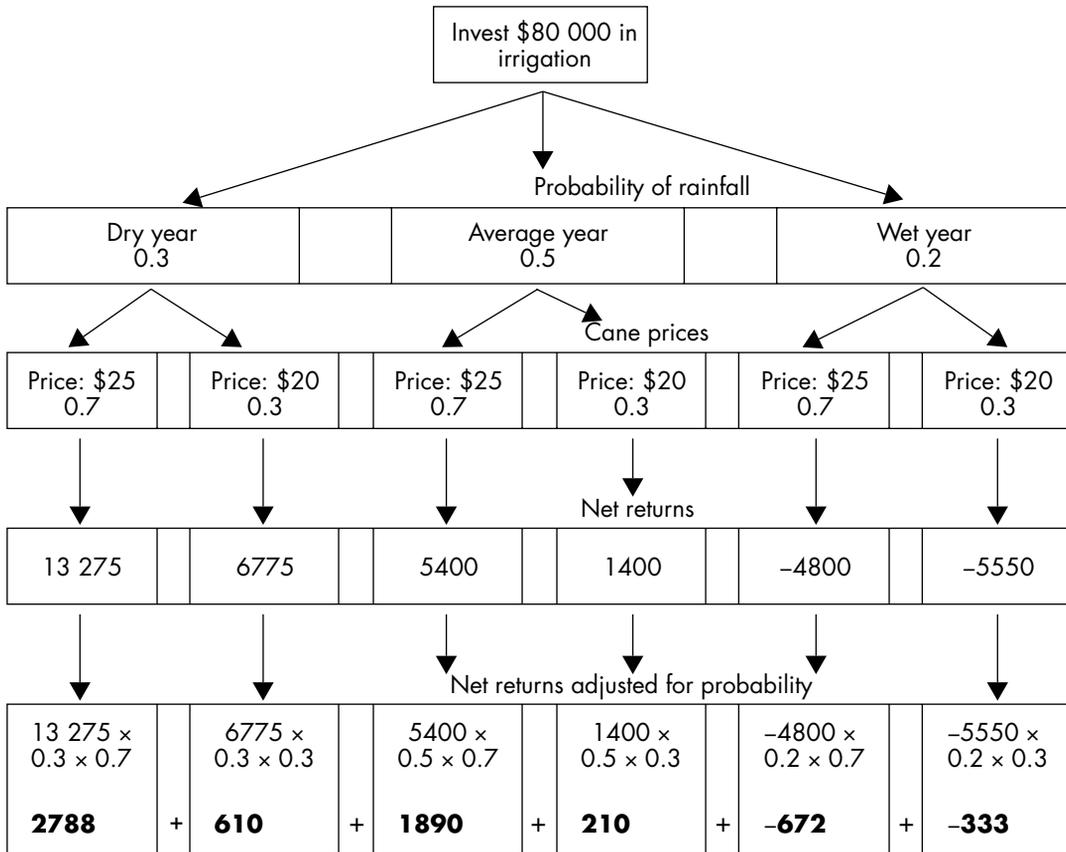
EXAMPLE: Decision on an irrigation investment.

Tom and Mary Toiler farm in an area where rainfall is marginal. They are thinking of buying a water allocation and installing equipment at a total cost of \$80 000. They can purchase 135 ML of water per year. In a dry year, they would use 135 ML of water and produce an extra 1300 tonnes of cane; in an average year, 90 ML and 800 tonnes; in a wet year, 30 ML producing an extra 150 tonnes of cane. They must pay for their allocation whether they use it or not. Water costs \$50 per ML and pumping costs are \$25 per ML.

They are worried that cane prices could fall. They have been advised that there is a 30% chance of cane prices falling from \$25 to \$20. Harvesting costs plus levies are \$7 per tonne. All other costs will remain the same. Tom and Mary could invest in long-term bonds at 5% pa.

A positive total in Figure 4 means that the proposal is 'most likely' to show a profit. A negative total means the proposal will probably result in a loss. As the opportunity cost (\$4000) is less than the return from irrigation, the decision to proceed with the proposal would be a good one. Whether it is the right decision will depend on cane prices and the weather.

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**Total = \$4493**

Figure 4. Decision tree for an irrigation investment.

**TRAINING AND EDUCATION**

*‘If you think education is expensive, wait until you see what ignorance is going to cost you.’*  
Pita Alexander

Education is about improving experience and skills. It comes from many sources, not just formal courses and training. Field days, farm bus tours and seminars are valuable learning opportunities. They should be used to advantage.

Farmers should make use of training when it is offered. The following topics may be useful: pesticide application, crop nutrition, basic computer training, farm record keeping, budgeting, understanding and making use of weather forecasts, developing

a farm plan, preparing a business plan, and environmental management.

Farm business management training is offered by state agriculture departments, TAFE, BSES and private providers. Subsidies for training are often available.

**BENCHMARKING**

How well is a farm business performing? How does the use of resources (including owner’s labour) compare to other farmers? How do farm costs and profitability compare? The only way to answer these questions is by benchmarking against other farms.

Benchmarking or comparative analysis is the practice of analysing a business and comparing it to similar businesses whose

**MANUAL OF CANEGROWING**

records have been analysed the same way. Farmers make comparisons all the time. Who had the best CCS last week? Which farm produced the highest tonnes of sugar per hectare last year? Where did my farm rank?

These productivity comparisons are useful, but they do not reveal anything about a farm business. How do costs and practices compare? Knowing how a farm ranks for profitability per hectare is more useful than knowing how it ranks for productivity.

**Which benchmark to use?**

Which benchmark to use depends on personal choice and personal needs. If labour is critical on the farm, then tonnes of cane per person is an important benchmark. In reality, a number of different benchmarks need to be considered (Table 2).

Which of these farms is the best 'performer'?

**Case 1**

	Farm A	Farm B	Farm C
Area	100	100	133
Cane t/ha	100	95	90
CCS	14.0	14.3	14.4
<b>TCCS/ha</b>	<b>14.0</b>	13.6	13.0

Farm A has the highest production per hectare.

Simple benchmarks such as tonnes cane/ha or tonnes sugar/ha show productivity but do not allow fair comparisons across different soil types and districts. An average yield on cheaper cane land may give a better financial return.

**Case 2**

Additional information:

Sugar price: \$300/t

Harvesting and levies: \$6/t.

Farm A has \$100 000 more invested in sheds and machinery than farms B and C.

Farm C requires greater fertiliser input.

	Farm A	Farm B	Farm C
Price per tonne	27.58	28.39	28.66
Gross \$/ha	2758	2697	2579
Growing + harvesting costs/ha	1500	1470	1550
Gross margin/ha	1258	1227	1029
Overheads	60 000	50 000	50 000
<b>EBIT/ha</b>	<b>658</b>	<b>727</b>	<b>653</b>

Farm B is the most profitable farm per hectare; it has the highest Earnings Before Interest and Tax (EBIT) per hectare.

Publicly listed companies show EBIT in their profit and loss statements. EBIT considers all costs (except interest and tax) and is easily calculated for most farms. Excluding interest and tax expenses allows comparison between farms with loans and those without and between businesses with different tax arrangements.

**Case 3**

Additional information:

Farms A and B have similar land values.

Farm C is on slightly poorer land and further from town.

	Farm A	Farm B	Farm C
Investment per ha	12 000	11 000	9000
<b>Return on Investment %</b>	<b>5.5</b>	<b>6.6</b>	<b>7.3</b>
Farm value	1 200 000	1 100 000	1 200 000

Farm C is the best investment; it has the highest Return on Investment (ROI).

The one thing EBIT does not consider is 'How much did the business have to invest to obtain that income?' ROI shows the net return of the business as a percent of the value of the business. It allows comparison of the return from the farming business to other businesses and to other investments. An ROI of 6% means the business is returning 6% after all costs. A farm is an investment. One of the most important things to know about any investment is, 'How much is it returning?'

**Table 2.** Choosing the right benchmark

	Definition	Advantages	Disadvantages
<b>Tonnes sugar per ha</b>	Production per unit area	'Hard' numbers simple to calculate	'Rewards' farmers on good soil Ignores all costs and capital investment
<b>Gross margin per ha</b>	Gross income less direct growing costs	'Hard' numbers fairly simple	Ignores overheads and capital Requires adequate cost records
<b>EBIT per ha</b> Earnings before interest & tax	Gross income less direct growing costs & overheads including depreciation	Considers production and <b>all</b> production costs Allows for fairer comparisons between farms and different crops	Does not consider opportunity cost
<b>ROI</b> Return on investment	EBIT divided by total investment (farm + buildings + machinery)	True return on capital Allows comparison between different business types and investments	Asset valuation can be subjective

## GOOD TIMES, BAD TIMES

### The good times

Advice on how to maximise the benefits of good returns is just as important as advice on minimising the impact of low returns. How to structure the farm business during periods of favourable returns will affect how the business performs during periods of low returns.

Advice should be sought from an accountant and investment adviser on accelerating loan repayments, expanding the business, investing in Farm Management Deposits (these deposits reduce tax liability in years of high income and provide reserves for low income years), other off-farm investments, and tax advice. Pre-payment of allowable expenses may reduce tax liability. Remember, the aim is to maximise after-tax profitability, not just to minimise tax.

The temptation to overcapitalise with farm machinery should be resisted, as every dollar spent today on new machinery will increase

overhead costs for the next 10 to 15 years. Joint ownership of major items, such as large tractors, planting equipment, earthmoving equipment, and implements used for only short periods such as rippers and trash rakes, should be considered. Sharing with just one neighbour can give most of the benefits of ownership at only half the cost.

### The bad times—surviving low prices

Sugar prices are cyclical. The most important thing in periods of low prices is to maintain production. Costs should be cut only where they will not affect production.

A 5-year study of cane farm financial records showed that six key cost areas made up 80% of the total costs. They were harvesting, fertiliser and chemicals, fuel, repairs and maintenance, overheads, and labour. The study showed that controlling short-term costs, while maximising tonnes of sugar per hectare, achieved the best economic performance.

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Good management practices should not be reduced. Cutting back will save costs initially, but may result in reduced yields and a longer recovery time when prices do improve.

Productivity can be maintained by controlling short-term costs, and good management practices are the best strategy for coping with low prices. The farm fertiliser program should be based on soil testing and seeking local advice. Many canegrowing soils have good reserves of calcium, magnesium, phosphorus and potassium. It may be possible to reduce inputs for several seasons without affecting yields. Spraying weeds early reduces competition and may allow lower herbicide rates.

Fuel operations that will not affect productivity should be eliminated; work only to the appropriate depth.

Unnecessary expenses should be eliminated. The best interest rate for the farm and the most competitive farm insurance policy should be obtained, and operations should be rescheduled or contracted to reduce hired labour.

Financial management to survive low prices should include the following steps:

Keep good records to allow assessment of the situation. A cash flow budget shows if the business will make a cash surplus or deficit and indicates what the peak overdraft may be. If the budget shows a deficit, this should be discussed with an accountant or financial counsellor.

In times of low sugar prices, it is natural to feel stressed. Knowing and understanding the farm's financial position will help. Advice from an accountant and bank manager should be sought and restructuring your loans should be considered.

Farm financial counsellors can analyse the farm's financial position and help with applications to the Rural Readjustment Authority. Centrelink provides assistance through the Retirement Assistance for Farmers scheme, Farm Family Restart Scheme and Exceptional Circumstances Relief Payment.

Farm Business Management training for the future is offered by State agriculture departments, TAFE, BSES and private providers. Subsidies for training are often available.

### STRATEGIES FOR THE FUTURE (WHERE IS THE BUSINESS GOING?)

*'An average is where the best of the worst meet the worst of the best.'*

Somebody has to be average, but it does not have to be you. It is very difficult to stand back from the pressures of everyday work and see the bigger picture. People are often so busy working *in* a business that they do not take the time to work *on* the business and on achieving their personal aspirations.

What are the goals for the business and for each person and what can be done to achieve them should be decided. It is important to involve the whole family in this process. The following guide may help.

Decide what the goals are. Is production to be increased by 10%, is more time to be spent with the family, or will retirement be in 5 years? Goals are different from wishes. Winning 'Gold Lotto' is a wish, but investing \$5000 each year in the stock market for the next 10 years is a goal.

Goals should be SMART goals. SMART goals are:

**Specific**—To increase production by 10%.

**Measurable**—e.g. 'being healthier' is not measurable, but exercising three times a week is.

**Agree**—Have other people directly affected by this goal agree to it.

**Realistic**—Can this goal be achieved realistically?

**Time**—set a time to achieve the goal by, e.g. retire in 5 years.

After setting goals, take stock of your present situation before deciding how to achieve those goals. A SWOT analysis is a good way to review your present situation.

The SWOT analysis lists the Strengths, Weaknesses, Opportunities and Threats to the business (Table 3).

**Table 3.** SWOT analysis.

Things within the business	
<p><b>Strengths</b></p> <p><i>What makes farmers and their farm business strong and competitive?</i></p> <p>e.g. fertile soil, good production record</p>	<p><b>Weaknesses</b></p> <p><i>In what areas do the farmer and the farm perform poorly or below potential?</i></p> <p>e.g. low production in dry years, overcapitalised</p>
Things from outside the business	
<p><b>Opportunities</b></p> <p><i>What opportunities exist to develop the farm business?</i></p> <p>e.g. a nearby farm is for sale, adopt new technology</p>	<p><b>Threats</b></p> <p><i>In what areas is the business vulnerable?</i></p> <p>e.g. low prices, interest rates</p>

After identifying the strengths, weaknesses, opportunities and threats relating to the farm business, decisions can be made about each of these items. Not everything can be changed.

**Strengths:** Which of these strengths help achieve the goals? For example, if machinery and time is adequate, can more land be bought or leased to increase production?

**Weaknesses:** What can be done to overcome these weaknesses? For example, if the farm's productivity is not in the top 25% for the soil type, what can be done to improve it?

**Opportunities:** What opportunities outside the farm can be taken advantage of? For example, can contract ripping or fertilising be provided to other farms in the district? Is there other land that can be leased or bought, or are there other off-farm investments?

**Threats:** What can be done to reduce exposure to threats outside the farmer's

control? For example, does the farm have reserves to carry it through periods of low price?

This process details the current situation. Now goals need to be reviewed and decisions made on how to achieve them.

Goals probably will not be achieved by a single action. There may be several means to achieving each goal. Each of these means represents a strategy. If a goal is to increase income, possible strategies are to increase productivity and to farm more land.

Achieving each strategy will require a series of actions. For example, if a strategy is to increase profitability by buying more land, it may include the following actions:

Discuss with an accountant whether the investment is worthwhile. If the answer is 'Yes' then:

- Prepare a cash flow budget which includes costs and income from the new land;
- Negotiate with the seller;
- Prepare a loan application for your bank.

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*BSES provides training for farmers in both financial and production records.*



*Group learning improves farm management skills.*

Prepare a plan of action for each strategy. The following framework may be useful.

**Goal:**  
e.g. To increase profitability.

**Strategy:**  
e.g. Purchase a nearby farm which is for sale.

Action plan:

Action:	Date to complete by:	Person responsible:
1		
2		
3		
4		
5		
6		

Management is about setting goals and making and implementing decisions to achieve them. Goals are not just about profits and acquisition. Personal and family goals are even more important. The difference between ambition and happiness needs to be considered. Ambition is getting what you want. Happiness is liking what you get.

**BORROWING**

Capital is just one of the resources every farming business needs. If there is a shortage of a resource such as labour, one solution is to hire more labour. If there is a shortage of capital resources, the answer may be to hire capital. ‘Hired’ capital is a loan; the interest rate is the hire fee.

Farmers borrow for a number of reasons: to improve the efficiency of the business, e.g. installing irrigation equipment; to continue operating in difficult times; to expand the business, e.g. buying more land.

Borrowed funds need to generate extra cash flow or net worth for the business.

Whether a loan is justified depends on how much extra income and expense will be generated. Preparing a long-term budget will help answer this question.

**To borrow or not to borrow?**

A large loan is an added responsibility. In favourable times, financial gearing is likely to increase returns. In adverse times, it may have the opposite effect. If a large loan is being considered, the following steps may help in deciding whether to borrow and how much to borrow.

- (1) Determine the current financial position. Prepare a Statement of Assets and Liabilities and a Cash Flow Statement. These statements will show the current debt status and how well a business can meet its present obligations.
- (2) Determine the tax implications of the loan. Seek advice from an accountant. Do not confuse tax deductions with tax saved. Remember the goal should be to maximise profits, not minimise tax.
- (3) Decide if the investment justifies the loan. See the section on ‘Basing decisions on returns’.
- (4) Work out the risks. Can the farm still meet loan repayments if the price drops by 20% or if crop yields drop 20%? What if both yield and price drop? Preparing a budget on a suitable computer program makes it easy to answer these ‘what if’ questions.
- (5) Decide on the term and type of the loan. Do not use short-term financing, e.g. overdrafts, to finance long-term projects. The life of the project should determine the term of the loan. The bank manager can advise on the types of loans available.

**Getting the best interest rate**

Applying for a loan is like putting a business proposition to a potential partner (the bank). Any proposition (application) has to be considered from the bank’s point of view. How well the case is made will determine

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whether the loan is approved and what interest rate is charged. When assessing farm loan applications, lenders consider the following:

- What will the loan be used for?
- Is the borrower someone with whom they want to do business?
- How risky is the industry? Irrigated sugarcane or dry-land wheat?
- How risky is the business? Is the farm viable with a sound history of production and financial responsibility?
- How easily can the business repay the loan?
- What security is offered against the loan?

The interest rate charged will be the bank's basic lending rate plus a premium for the risk perceived by the bank. What premium is charged depends largely on the farm's situation and how well the case is presented. If additional land or equipment is being bought, the additional costs as well as the additional income that will be generated need to be spelt out. An accountant should be consulted *before* the bank manager.

### TRANSFERRING THE FARM TO THE NEXT GENERATION

Farming is mostly a family business. There is often a strong desire to 'keep the farm in the family' as one generation retires and the next generation takes over. Despite the best of intentions, the issue of 'handing over the farm' can cause great friction between family members if not handled the correct way. This is because each family member will have different expectations and concerns. Other family members are often not aware of these expectations and concerns.

The keys to successful farm transfers are good communication between family members, respect for each other's expectations, and a willingness to work through the issue together. Fifty per cent of communication is listening.

'We've never spelt it out but everyone understands what will happen when we decide to retire.'

These words should ring alarm bells, loudly. What does everyone understand? Does 'when we retire' mean at age 90? If the whole family has not discussed this together, then some family meetings are needed.

Someone who will be seen as neutral should be asked to facilitate the meeting. An accountant, solicitor or a professional mediator would be a suitable person. At the meeting/s, each person should describe their expectations about how the farm will be passed on. This includes the following questions. Who wants to remain on the farm in the long term? Who wants a career outside the farm? Who has contributed to the farm through unpaid or low-paid work? What does everyone see as their 'stake' in the farm? When would the present generation like to retire? When would the next generation like to assume control?

Hearing the answers to these questions may produce some surprises, particularly if farm transfer has not been discussed before. It is usually a good idea to let everyone 'digest' what has been said at the meeting before getting together again. It may be that no one wants to remain on the farm.

The aim of the second meeting is to develop and explore some options together on what can be achieved and how it might be done.

After working out some broad strategies, it is time to talk to an accountant. Capital gains tax can have an effect similar to death duties. Without proper financial planning, the next generation could inherit a substantial debt along with the farm. At the next meeting, the accountant should describe the financial and tax implications of the different options the family is considering. The issues here include: What is the most tax effective way to hand over the farm? (This should consider family members who do not wish to remain on the farm.) How can the retiring generation best

use superannuation to provide income during their retirement?

The family must now decide on an agreed plan and work out how and when to implement it. As circumstances change in the future (e.g. marriage of a son or daughter), it may be necessary to modify the plan.

### FURTHER READING

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### GLOSSARY

**Some terms used in farm business management are:**

**Accrual method of accounting.** Income and expenses are recorded when they are

earned/accrued regardless of when the cash is received/paid.

**Annuity.** A series of uniform regular payments.

**Balance sheet.** A financial statement that summarises the assets, liabilities and net worth at a set date.

**Book value.** The depreciated value of an asset as recorded for tax or management purposes.

**Break-even point.** The level of production at which income equals expenses.

**Budget.** A cash flow budget is a statement showing forecast income and cash expenses. A profit and loss budget shows changes in net worth.

**Capital expenditure.** Payments made for assets above a minimum value (\$300 for tax purposes) which will be used for more than 1 year.

**Cash book.** A book to record income and payments as they are received or made.

**Cash method of accounting.** Income and expenses are recorded as they are received or paid.

**Current assets.** Assets that will be used up within the next year, e.g. fertiliser on hand.

**Current liabilities.** Liabilities due within the next 12 months.

**Discounting.** Determining the value today of money that will be paid some time in the future.

**Double entry accounting.** A book keeping system where every transaction is recorded as a debit in one account and a credit in another account.

**Equity.** The owner's 'share' of the business. Also called 'net worth'.

**Fixed costs.** Costs that do not vary with the level of production.

**Gross margin.** Gross income less variable costs.

**Inventory.** A list of assets used for production and produce on hand, e.g. standover cane.

**Market value.** What an asset would bring if sold in a fair market.

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**Net worth.** Total assets less total liabilities.

**Non-cash costs.** Costs which do not involve cash payment, e.g. depreciation.

**Opportunity cost.** The cost of using a resource based on the return from the next best alternative use of that resource.

**Overhead costs.** Costs that relate to the business as a whole and cannot be attributed to specific activities.

**Replacement cost.** The value of an asset based on the cost of replacing it.

**Resource.** Something used in the production cycle.

**Risk.** The chance of an unfavourable result.

**Salvage value.** The value of an asset at the end of its useable life.

**Total cost.** Overhead costs plus variable costs.

**Variable costs.** Costs that change directly with production.

**Working capital.** Current assets less current liabilities.

### INTERNET SITES

@griculture Online (Aust):

<http://www.agric.nsw.gov.au/>

British Columbia Business Management

Information: <http://www.fbminet.ca/bc/>

BSES: <http://www.bsos.org.au/>

Canadian Farm Business Management

Program: <http://www.cbcs.org/fedbis/>

Cash flow/profitability program:

<http://web.aces.uiuc.edu/fbfm/>

Department of Agriculture, Forestry and

Fisheries-Australia: <http://www.affa.gov.au/>

GST for farm businesses:

<http://www.affa.gov.au/taxreform/>

Iowa State University extension

<http://www.exnet.iastate.edu/>

NSW Agriculture:

<http://www.agric.nsw.gov.au/>

Pay As You Go (PAYG) tax:

<http://www.taxreform.gov.au/>

Primary Industries South Australia:

<http://www.pir.sa.gov.au/>

Queensland Dept of Primary Industries:

<http://www.dpi.qld.gov.au/>

Quicken As a Farm Accounting System:

<http://ideas.uqam.ca/ideas/data/Papers/woputstec9615.html>

Quicken Australia:

<http://www.quicken.com.au/>

Rural Industries Research & Development

Corporation newsletter:

<http://www.rirdc.gov.au/nsltaut98.html>

Saltbush Software:

<http://saltbush.une.edu.au/>

University of Illinois extension:

<http://www.aces.uiuc.edu/~ve/>

Washington State University:

<http://www.agecon.wsu.edu/>

Women in Agriculture, Australia:

<http://www.abc.net.au/rural/women/link.htm>



FARM BUSINESS MANAGEMENT

