

Figures for a Farming Future

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Getting Started in Farm Management Accounting **Part I: Using the farm accounts to point the way**



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Figures for a Farming Future

Getting Started in Farm
Management Accounting

Part I: Using the farm accounts to point the way



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Foreword

UK farming will continue to face radical change in the coming years, not least through unprecedented reform of the CAP less than 12 months from now. CAP reform and decoupled support are however only two of many issues shaping the economic climate farmers face. Meeting customer requirements on price and quality is the common thread running through economically sustainable food production and diversification. This starts with ensuring the farm business is profitable and viable.

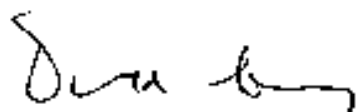
These booklets form a key part of the Sustainable Farming and Food Strategy in England. The Report of the Policy Commission on the future of Farming and Food in England noted the *'striking range in performance in farming'* and the need for a *'stronger and more comprehensive benchmarking drive to help poorer performers identify reasons why they are falling behind'*. In similar vein *A Forward Strategy for Scottish Agriculture* emphasised that farm businesses should review their cost structures and use benchmarking and peer review to test their own businesses against the best elsewhere in Scotland and abroad.

Against this background the Policy Commission recommended that *'relevant data is collected to underpin benchmarking work.'* The government's published response took this forward: *'A booklet on management accounting for farmers is being produced to provide an industry standard for definitions.'*

These booklets take this further by covering definitions and by providing a means by which farmers will be able to make better use of their annual accounts and get an introduction to basic farm business management techniques. They are aimed at all farmers, including those who, perhaps through some lack of confidence or interest, have not been involved with business management, planning and budgeting. The booklets will help farmers keep track of how well their business is performing and plan what action, if any, they need to take.

Two booklets have been prepared under the joint title 'Figures for a Farming Future'. The first, 'Using the Farm Accounts to Point the Way' explains how to make use of the farm's profit and loss account and the balance sheet to see where the business sits and how viable it is. The second booklet, 'Mapping Out a Farming Future' explains how possible changes to the farm business are assessed so that plans are made on as sound a basis as possible.

The booklets cannot provide all the answers, but they do provide a starting point, and a platform from which outside help can be more usefully applied, be it from the Farm Business Advice Service in England, the forthcoming Farm Business Advice and Skills Service in Scotland, consultants, accountants or benchmarking with other farmers. The Food Chain Centre has gathered evidence from farmers who practice benchmarking and has shown it can bring beneficial results. The Food Chain Centre, Defra and the Scottish Executive will be promoting benchmarking to farmers and encouraging them to participate in the increasing number of schemes available. Similarly the Red Meat Industry Forum is working with livestock producers to promote and embed the use of benchmarking as one of the means to achieve continuous business improvement.



Sir Donald Curry

Preface

The authors, Defra and SEERAD (Scottish Executive, Environment and Rural Affairs Department), would like to thank the farmers that took part in the pilot testing of these booklets as well as the many stakeholders who provided comments and suggestions, including the Institute of Chartered Accountants in England and Wales and the British Institute of Agricultural Consultants.

Farmers can work on their own through these booklets and they will particularly help those who have little or no experience in management accounting. To take things further and thereby get even more out of these booklets, many farmers would benefit from joining a benchmarking service and/or a local farmers group covering business management awareness and skills. Others can seek individual advice from a qualified consultant or their accountant. Help is also available from the Farm Business Advice Service in England, Farming Connect in Wales and the forthcoming Farm Business Advice and Skills Service in Scotland. Contact details for these and other organisations that can help are:

Farm Business Advice Service
0845 600 9006

Forward Farming
ELITE Consortium Ltd
Stoneleigh Park
Kenilworth
Warwicks CV8 2NE
Tel: 01995 642255

Highlands and Islands Local Enterprise Company and
Scottish Enterprise Business Gateway
Helpline number 0845 609 6611.

Farming Connect Service Centre
Welsh Development Agency
08456 000813

Food Chain Centre at IGD
Grange Lane
Letchmore Heath
Watford
Herts WD25 8GD
Tel: 01923 857141
www.foodchaincentre.com

Milk Development Council
Milk Bench – National Dairy Benchmarking System
www.milkbench.org.uk

Red Meat Industry Forum
PO Box 44
Winterhill House
Snowdon Drive
Milton Keynes MK6 1AX
Tel: 01908 844710
www.foodchaincentre.com

British Institute of Agricultural Consultants
The Estate Office
Torry Hill
Milstead
Sittingbourne
Kent ME9 0SP

Secretary, Farming and Rural Business Group
Institute for Chartered Accountants, England and Wales
Chartered Accountants Hall
PO Box 433
Moorgate Place
LONDON EC2P 2BJ

These booklets are part of a package of management accounting aids to farmers that the Government will release in 2004. In addition to these booklets there will be three key items:

1. A Guide to Converting the Farm's Financial Accounts into Management Accounts

This will show how farm financial accounts and management accounts can be reconciled. The document will provide farmers and others with a better understanding of how financial accounts can be converted into management accounts.

2. An Interactive Database based on Farm Business Survey Data

This will enable the individual farmer to compare the financial results from their farm business with group averages based on data from the Farm Business Survey.

3. Publication covering Terms and Definitions and their application in Farm Business Management

A more exhaustive publication to cover terms and definitions and their application in the context of farm business management.

Announcements will be made by Defra and SEERAD as and when these items become available.

Introduction

To be viable your farm business needs to be profitable enough to fund the demands on the business. These are (i) private drawings (money you take for your own use), (ii) tax, (iii) re investment and (iv) repayment of borrowing.

You can use farm accounts to check how viable your farm is. They provide a lot of very useful information, if you know how to use it. This booklet will help you get far more out of your accounts.

To get the most out of the booklet, you will need your latest set of accounts. Financial accounts can appear complicated but, with a bit of patience, you'll quickly pick up the basics to use them to good effect.

This booklet shows the things accounts can tell you about your business, including how well it is performing. You will then be ready to plan ahead to increase profit to make sure your business has a viable future. That's where part two of this series, **'Mapping out a farming future'**, comes in.

These booklets describe quite a simplified approach. More sophisticated farm management analysis is available, but these booklets provide an important first step.

Forthcoming change to the Common Agricultural Policy in terms of decoupling support from agricultural production means that it will be increasingly important to produce only those products you can produce profitably without subsidies. Management accounting will help you make decisions on what you produce based on your own financial records.

Action

- Work your way through the booklets and ask yourself the questions
- Consider joining farm management/benchmarking clubs or groups
- Look at the management training options provided by your local agricultural college.
- Consider engaging a farm business consultant

Figures for a Farming Future Getting Started in Farm Management Accounting

Part I: Using the farm accounts to point the way

Cash, profit and capital

These are the three most important ingredients in a farm business.

- You can use **cash** to pay the bills for materials and services that are transformed into saleable products. A business that runs out of cash to pay bills will quickly be in trouble. Your bank statements show you how cash flows in and out of the business during the financial year.
- **Profit** is the amount of yearly sales and receipts **less** costs. It is usually shown as 'net profit' in farm accounts. 'Gross profit' is also sometimes shown but this is after direct costs but before overhead costs such as labour, machinery (including depreciation) and rent have been taken off. Essentially, net profit is what is left to pay for personal drawings, tax and loan repayments. Your **profit and loss account** shows you the net profit (or 'profit') made from trading activities over the financial year.
- **Capital** is the money invested in the business. Some capital will belong to the owner and some may be borrowed from outside the business. Your **balance sheet** shows the capital position (i.e. assets less liabilities) of your business at one point in time, usually the last day of the financial year.

Home Farm

We have used the example accounts of 'Home Farm' to show how you can assess profit and capital, and at each stage you can carry out the activities yourself using your own accounts. Home Farm is a 130-hectare owner-occupied dairy farm with 120 milking cows. It also produces cereals and potatoes.

Note: terms used in financial accounts can vary from farm to farm and the terms used in this booklet may differ slightly from those in your own financial accounts. However, where there is a possibility of this occurring this is stated in the text.

The trading and profit and loss account

The trading and profit and loss account

The trading performance of the business over the year is measured by the **net profit (sometimes just called 'profit')**. Net profit or 'profit' is concerned solely with items of income and expenditure, including depreciation, arising from the **trading activities** of the business, for example, selling wheat, buying fertiliser and so on.

The profit and loss account you receive from your accountant might contain more detail under each heading but will probably look something like this:

Home Farm – Profit statement (simplified)

	£	£
Sales and subsidies*	346,095	
Sundry revenue	1,500	
	Total	347,595 a
Cost of sales		
Opening valuation	144,625	
Direct costs	125,577	
less closing valuation	(136,759)	
	Total	133,443 b
Gross profit (a-b)		214,152 c
less overhead costs		
Labour**	51,291	
Power and machinery costs, including depreciation	70,087	
Property and land expenses	10,474	
General overheads	10,316	
Rent and finance*** costs	46,265	
	Total overhead costs	188,433 d
Net profit (or 'Profit') (c-d)		25,719

* sales and subsidies should always be shown gross, i.e. before the deduction of levies, weigh charges, haulage, drying and handling costs etc. These deductions should be included in direct costs.

** hired only

*** finance costs include interest charges and bank charges but exclude loan repayments.

The value of trading stocks at the start (opening valuation) and end (closing valuation) of the year is included in the gross profit calculation. Stocks include raw materials, cultivations, livestock and harvested crops in store.

Activity

Compare the layout shown here with your most recent profit and loss account to identify the various parts of the account.

The net profit needs to be sufficient to pay for personal drawings, tax and loan repayments.

Figures for a Farming Future Getting Started in Farm Management Accounting

Part I: Using the farm accounts to point the way

After you have found the annual profit, you need to identify whether the business is profitable enough to meet the needs of personal drawings, tax, loan repayments and reinvestment. You may find that your profits are too low to meet the needs of the business.

To find the answer, you need to ask two more questions.

- a What level of available funds does the profit **need** to create to allow for drawings, tax, loan repayments and reinvestment? You need to look beyond the profit and loss account to find the total demands on your profit (for example, details of loan repayments and reinvestment, as well as personal drawings and tax).
- b What level of available funds does the profit **actually** create for you to spend on drawings, tax, loan repayments and reinvestment? You need to make some adjustments to the profit figure so that it represents the available funds created by your trading activities. As depreciation (of machinery, equipment, buildings and property improvements) is a non cash item of expense, you will need to make adjustments for it

a Demands on profit

The sources of this information are shown in the table below – if in doubt, clarify with your accountant.

Information needed	Information source	Notes
Personal drawings and tax	The capital account – shown on the balance sheet or attached to the notes to the accounts prepared by your accountant .	The capital account shows how the proprietor's investment has changed over the year. Profit can increase your wealth, while drawings and tax reduce your stake in the business.
Repayments or reductions of loans, mortgages and overdraft	Information provided by lenders (contact them if necessary)	If you cannot get the exact figure, make a realistic estimate (remember that the interest is already taken off in the calculation of profit).
Reinvestment, for example in buildings, equipment and machinery (in a 'normal' year)	Schedule of fixed assets included in the notes to the accounts You need to estimate the amount of capital the business would normally invest in buildings, equipment and machinery in one year, less disposals (asset sales). It is important to consider whether what is shown on the most recent accounts represents a 'normal year' for new investment. If it does not represent a normal year, consider the average annual investment (net of trade ins) over the last 5 to 10 years. This will give you an indication of the 'normal' annual level of investment required to keep the business going.	Investment is any new expenditure on capital items over a 12-month period (cost of additions less the value of things you sell). Investment is funded by available capital or from borrowed capital. Investment here is funded by available capital. If it is funded by borrowed capital, it should be allowed for under 'repayments or reductions of loans' etc in the middle box and excluded from here to avoid counting it twice.

The trading and profit and loss account

Activity

Find the figures detailed in your own accounts and fill in the table to work out total **(A)** the demands on your profit.

	Home Farm £	Demands on your profit £
Personal drawings (see note 1)	32,329	
Tax	0	
Repayments of loans etc	0	
Reinvestment (see note 2)	31,025	
Total (A)	£63,354	£

Note 1: Consider carefully how much money is taken out of the business as personal drawings. Also consider how much you and your family would be prepared to live on if the level of drawings needs to be reduced because the current demands on profit are too high. This way you will be able to judge the minimum demands on profit.

Note 2: Investment is funded by available capital or from borrowed capital. New investment here is investment funded by available capital. If it is funded by borrowed capital, it should be allowed for in the 'repayments' box and left out of 'new investment' to avoid counting it twice.

b Profit adjustments (to identify the amount of cash created by the business)

- The net profit figure included a cost for depreciation, which is shown in the profit and loss account but is not a cash item of expense. As a result, it is added back to give profit before depreciation. This is a more accurate reflection of the amount of yearly available funds **generated** by the business.

Activity

Fill in the adjustment for your farm to find the profit before depreciation **(B)**.

	Home Farm £	Your Farm £
Net profit (from accounts)	25,719	
Add Depreciation	38,526	
Profit before depreciation (B)	£64,245	£

Is your business 'viable'?

If the profit before depreciation is at least equal to the demands of drawings, tax, capital repayments and re investment, as shown by total (A) in the previous table, the business is said to be 'viable'.

Figures for a Farming Future Getting Started in Farm Management Accounting

Part I: Using the farm accounts to point the way

Activity

Fill in this final step in assessing how profitable your business is.

	Home Farm £	Your Farm £
Profit before depreciation (B)	64,245	
Total demands on profit (page 5) (A)	63,354	
(B) – (A)	£891	£

- If **(B) – (A)** is a positive figure, the business is viable. A surplus of funds over and above the demands on profit is important because it is a kind of 'profit reserve'. For example, this reserve could allow the business to stay viable even after a sudden fall in product prices.
- If **(B) - (A)** is a negative figure, the business is non-viable. The deficit (loss) has to be made up from other sources of funds, such as an increase in the overdraft or private investment from yourself or another person.

The example of Home Farm shows a small positive figure, therefore the business is viable but the demands on the profit are almost as high as the profit itself. The trading funds surplus exceeds the demands on profit by £891.

If your figure comes out as negative it is not necessarily a cause for concern.

This is merely a first estimate to indicate how the demands on your profit compare with the profit itself. There can be many reasons why the figure might come out as negative in any one year, however you do not want this to become a regular trend. Where the demands (i.e. the sum of drawings, loan repayments, tax and reinvestment) repeatedly exceed the profit before depreciation, the business is really living off capital and is unsustainable in the long term.

On Home Farm, reinvestment has been made during the year. A lower level of investment would mean a lower demand on profit and would help viability in the short term. However, in the longer term, if reinvestment in the business is not made, the business will be less able to create profits in future years.

A reduction in the level of personal drawings is another way of reducing demands on profit and helping the business to become more viable. It might be worth considering how much you and your family would be prepared to live on if the level of drawings needs to be reduced to allow the business to stay viable (assuming there remains scope to reduce drawings – which might not be the case). You could also consider whether off farm employment would help by reducing the level of drawings taken out of the business.

The trading and profit and loss account

If your business is making insufficient profits, you can improve them by assessing what enterprises you carry out. It may be useful to consider possible new roles and activities, for example:

- branching out into new business (for example, a farm tourism enterprise).
- reducing the number of enterprises you carry out.
- expanding or reducing the business.
- sharing machinery and/or labour with neighbours or through a machinery ring.
- altering the balance between the enterprises you undertake.
- letting out the land or have it farmed by a contractor.
- a contract farming agreement.
- selling the business to make alternative use of the capital released.

To explore these and other options for your farm, specialist advice is probably going to be necessary – the organisations listed in the preface can help here.

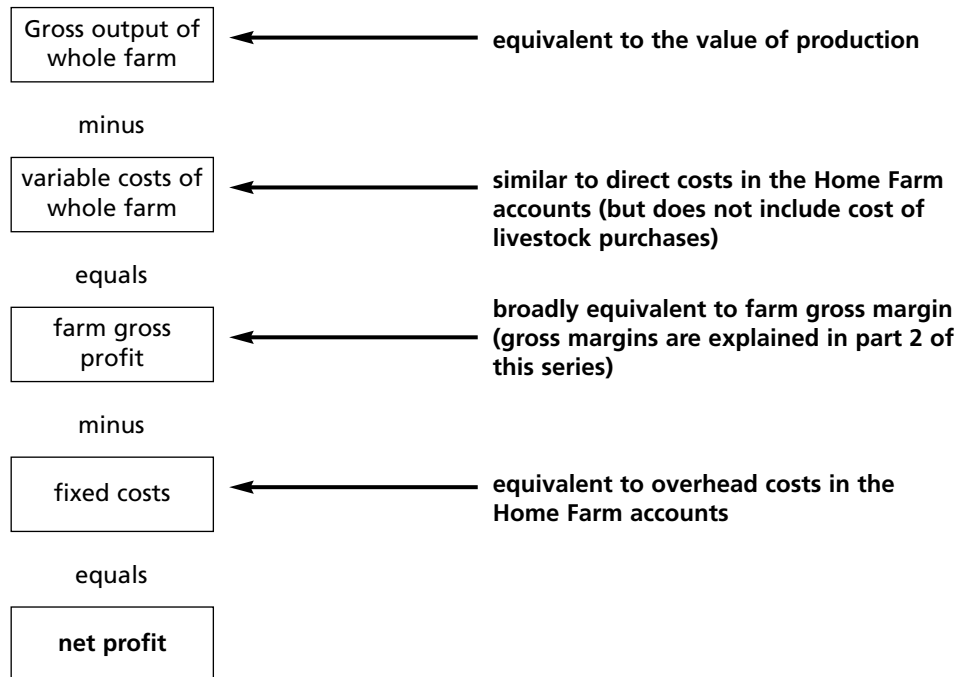
However, before considering such options in detail, it is worthwhile examining the current business to see where there is scope to improve profitability. To do this we need to organize the accounts so that they are a more useful management tool, i.e. start to convert them into *management* accounts. A key benefit with this is that it makes it easier for you to compare your business results, in terms of value of production, costs and profitability, with those of others.

Figures for a Farming Future Getting Started in Farm Management Accounting

Part I: Using the farm accounts to point the way

Organising your accounts to provide useful business information

For management purposes, the overall financial performance of the farm business is made up of the following stages.



Net profit is after depreciation has been deducted. If depreciation is added back we get profit before depreciation. This is a higher figure than net profit and is available for

- personal drawings
- tax
- loan repayments
- reinvestment in the business

Remember:

- Profits can change from year to year. In poor years, you may react by delaying plans for new investment.
- When profits are low or non-existent over several years, you need to rethink your business activities.

How do I identify my gross output?

Gross output is the full value of everything the farm business produces during the year together with appropriate subsidies and other support payments (government funds). At year-end you may have unfinished or finished produce that you haven't sold, therefore gross output includes the **closing valuation** for the year. The **opening valuation** is taken off because, although it will contribute to the current year's sales, it relates to the production activity of the previous trading year. The value of livestock purchases is also deducted.

At this point you need to be aware of two key differences that can occur between the financial accounts prepared by your accountant and management accounts.

First, in management accounts, at the opening and closing valuations, livestock and harvested crops on the farm are valued at market prices. In the accounts prepared by your accountant however, they might be based on cost of production rather than market prices. If this is the case, the valuations can be altered quite easily to create management accounts but it will be worth liaising with your accountant before doing this. In the example below it is assumed that the valuations of livestock and harvested crops have been based on market prices.

Second, financial accounts are prepared in respect of the financial year. Management accounts, however, particularly for farms with key arable enterprises, are often based on the 'harvest year'. This makes it easier to compare the economic performance of one harvest with another. To use the remainder of this booklet it is not necessary to convert your accounts to a harvest year basis. If you wish to prepare management accounts on a harvest year basis it would be worth seeking specialist advice.

Gross output therefore = sales + subsidies + closing valuation + sundry revenue – opening valuation – cost of livestock purchases.

The gross output of Home Farm is as follows.

Activity

Identify your own gross output.

Gross output	£
Sales and subsidies	346,095
Sundry revenue	1,500
plus closing valuation	136,759
less opening valuation	144,625
less cost of livestock purchases	4,850
Total	£334,879

Sales	£
Subsidies	
Sundry revenue	
Plus closing valuation	
Less opening valuation	
less cost of livestock purchases	
Total	£

How do I identify my variable costs?

There are two types of cost under the heading of 'trading expenditure'. These allow you to focus on individual enterprises (for example, milk, livestock, crops) that make up the farm business.

Figures for a Farming Future

Getting Started in Farm Management Accounting

Part I: Using the farm accounts to point the way

A **variable cost** is a cost which meets **all** the following conditions.

- It tends to vary directly in line with even small changes in the size of an enterprise.
- It is relatively easy to see which enterprise it relates to.
- You would no longer have to pay it if the enterprise ended.

Typical variable costs are:

- feedstuffs (including forage);
- veterinary, medical and artificial insemination (AI) fees;
- fertilisers;
- sprays;
- seed; and
- miscellaneous, for example baler twine, recording services and transport.

Variable costs can be allocated to specific enterprises, which can help you make management decisions – see booklet 2 (“Mapping Out a Farming Future”) for more details.

The variable costs of Home Farm are as follows.

Variable costs:	£
Feed	38,208
Fertiliser and sprays	56,445
Seeds	11,928
Vet and artificial insemination	14,146
Total	£120,727

The ‘direct’ costs included in the profit statement on page 3 also include the cost of livestock purchases.

Therefore the ‘direct’ costs in financial accounts (and included in the ‘cost of sales’) = variable costs + cost of livestock purchases as follows:

Total variable costs	120,727
Cost of livestock purchases	4,850
Total direct costs	£125,577

However, in management accounts the cost of livestock purchases is included in the calculation of output and is **not** included in either variable costs or fixed costs.

Activity

Identify your own variable costs.

Note: Casual labour and contract charges are excluded from variable costs in the example below. Although they can sometimes be related to specific enterprises, they are usually included among overhead or fixed costs in financial accounts. This is however not always the case and sometimes they will appear in variable costs rather than in overhead costs, particularly if the casual labour or contract charges are easily attributable to certain enterprises, e.g. casual labour and contract charges for harvesting.

Feed (including forage)	
Vet, medical and AI fees	
Fertilisers	
Sprays	
Seed	
Miscellaneous	
Total	£

Activity

Assessing your variable costs – Are they high, moderate or low in relation to output?

Each category of cost can be expressed as a percentage of gross output and compared to typical levels which are based on Farm Business Survey data.

Using the Home Farm example: Variable costs $\frac{120,727}{334,879} = 36\%$
 Gross output 334,879

The 'expected' figures in the tables below are based on typical cost levels found on farms in the Farm Business Survey* in England over four consecutive years, 1999/2000 to 2002/03 inclusive.

Analysing costs as a percentage of output is a fairly simplistic method and not always reliable, as explained later, but it does at least enable you to take a broad check on your cost levels to see how they compare with typical figures from the FBS.

* the Farm Business Survey is an annual survey commissioned by the government under which a range of management accounting information on all aspects of farmers' and growers' businesses is collected, using a sample of farms that is representative of the national population of farms in terms of farm type, farm size and regional location.

Figures for a Farming Future Getting Started in Farm Management Accounting

Part I: Using the farm accounts to point the way

Activity

Work out your variable cost ratio.

For example: Home Farm variable costs $\frac{120,727}{334,879} = 36\%$
Gross output

	Home Farm		
	£	Percentage of output	Expected percentage of output
Gross output	334,879	100%	
Variable costs	120,727	36%	under 50%*

	Your Farm		
	£	Percentage of output	Expected percentage of output
Gross output		100%	
Variable costs			under 50%*

* note variable costs on pig farms and poultry farms can often exceed 50% of output and this is therefore not a relevant figure for these farms or farms with a significant pig or poultry enterprise.

For every £100 of output, Home Farm spends £36 on variable inputs. This figure is within the expected range. If it was above it would signal a need for careful monitoring and control of variable costs (albeit careful monitoring and control of all costs should be the aim in all situations, even where costs are within the expected range).

If your cost figures come out above the typical limit then it is worth investigating why. There might be obvious reasons, for example variable cost levels on farms with dairy, pig or poultry enterprises might come above 50% of output. Another possibility is that for some reason, that particular year on your farm might have coincided with poor commodity prices and/or yields, thus perhaps temporarily depressing the output and inflating the costs as a proportion of output.

How do I identify my fixed costs?

Any cost that does not meet all the conditions for being a variable cost is called a **fixed cost** (or **overhead cost**). A fixed cost might still have to be paid even where a particular enterprise ended (for example, rent).

Activity

The fixed costs shown in your accounts will include some or all of the following costs. Identify the fixed costs in your own profit and loss account and fill in the final column of the table below.

[It is often useful and convenient to show these in cost categories or groups]		Home Farm £	Your Farm £
Labour	Regular labour and any casual labour	51,291	
Power and Machinery	Equipment repairs, fuels, electricity, contract and hire costs, vehicle licences, insurance and depreciation* of machinery and equipment, and machinering and equipment leasing costs	70,087	
Miscellaneous fixed costs	Property repairs and maintenance, Council Tax, water rates, property insurances, and depreciation* of buildings and property improvements Office and phone expenses, professional fees, subscriptions, and sundry overhead costs.	20,790	
Rent and finance costs	Rents and grass-keep charges, interest on all borrowings (loans, mortgages, overdrafts, hire purchases), quota leasing	46,265	
	Total fixed costs	£188,433	£

Note: ***Depreciation** is spreading the cost of an asset over its expected useful life. It is only an estimate of the cost to the business over the anticipated useful life of the asset. The final disposal value is usually different to the depreciated value, resulting in a profit or loss on sale of the asset.

Assessing your fixed costs – Are they high, moderate or low in relation to output?

Activity

Now work out your fixed costs as a proportion of output. For example:

$$\begin{array}{l} \text{Home Farm labour costs} \quad \frac{51,291}{334,879} \times 100 = 15.3\% \\ \text{Gross output} \end{array}$$

As with the variable costs, the 'expected' figures in the tables below are based on typical fixed cost levels found on farms in the Farm Business Survey in England over four consecutive years, 1999/2000 to 2002/03 inclusive. As with variable costs, analysing fixed costs as a percentage of output is a fairly simplistic method and not always reliable, as explained later, but does at least enable you to take a broad check on your cost levels to see how they compare with typical figures from the FBS.

Figures for a Farming Future

Getting Started in Farm Management Accounting

Part I: Using the farm accounts to point the way

Use the table below to compare your figures to the expected ones

	Home Farm		Your Farm		Expected percentage of output	
	£	Percentage of output	£	Percentage output		
Gross output	334,879	100%		100%		
Labour (not including the value of unpaid family labour)	51,291	15.3%			under 15%*	Under 40%*
Power and machinery	70,087	20.9%			Under 25%	
Miscellaneous fixed costs (property expenses and general overheads)	20,790	6.2%			Under 15%	
Rent and finance costs	46,265	13.8%			Under 15%**	

**note paid labour costs on horticultural farms can often exceed 50% of output and this is therefore not a relevant figure for these farms or farms with a significant horticultural enterprise.*

***on wholly or mainly tenanted farms the rent and finance cost may exceed 15% of output. With rent and finance costs it is useful to put these onto a per hectare basis to estimate the total 'rental equivalent' cost.*

- The analysis for Home Farm shows that cost categories are generally within the expected levels.
- Labour costs at Home Farm are quite high. However, because labour and machinery costs can substitute for each other, these two categories cancel each other out to some extent. Therefore, taken together, labour and power and machinery costs are within the expected level, at 36.2% of output.

Notes:

If you lease machinery, your power and machinery costs can be low in relation to the guidelines given above, because your leasing charges are included in the rent and finance category.

As with the variable costs, if your fixed cost figures come out above the typical limit then it is worth investigating why. Again there might be obvious reasons, such as it being a particularly bad year for machinery costs for example. Again, another possibility is that for some reason, that particular year on your farm might have coincided with poor commodity prices and/or yields, thus perhaps temporarily depressing the output and inflating the fixed costs as a proportion of output.

You should also note that using this approach to assess labour costs can be problematic and possibly misleading for farms that have a high dependence on 'unpaid' (e.g. family) labour. On such farms the paid labour cost levels can be very low when expressed as a proportion of output, simply because much of the labour is 'unpaid'. In such cases the paid labour cost will be an underestimate of the true labour cost, and the level of income demanded of the business to pay for the 'unpaid' labour might be very significant.

Activity

So far you have identified areas of strength and weakness in your most recent profit and loss account. If you want to see trends in your business performance over time, it would be a useful exercise to repeat this procedure using your accounts for the last two or three years, to identify any emerging trends in your profit.

Benchmarking and Comparative Analysis

The above methods are fairly simplistic ways of looking at variable and fixed costs but they are a useful starting point. Your gross output, variable costs, fixed costs and profit level can usefully be considered in more detail however.

Having identified and measured your output, costs and profit, the next step is to compare them with other farms of a similar type and economic size. A starting point is to look at whole farm figures in the sources of information listed at the end of this booklet. Better still is to compare or 'benchmark' your results against those from other farm businesses. This can be done through the organisations listed in the preface. You will also be able to use the interactive database which is based on Farm Business Survey data (and is also mentioned in the preface) when it becomes available later in 2004.

When doing any comparisons with other results, make sure you are comparing like with like – i.e.

- use results from farms of a similar type and economic size to yours,
- and for the same time period (accounting year or harvest year).
- make sure the cost definitions are identical. If, for example, contract charges are recorded as fixed costs in your accounts, but are shown as a variable cost in the results you are comparing with, you will have to make an adjustment to your figures by removing them from variable costs and adding them to fixed costs.
- similarly, sometimes labour costs include the value of unpaid labour – you might have to allow for this.
- also, owner occupied land is sometimes allocated an imputed rent so that farms can be compared on a consistent basis irrespective of whether they are owner occupied or tenanted.
- usually, it is also helpful to divide your whole farm figures by the farm area so that output, costs and profit are compared on a per hectare basis. This helps when comparing farms with different land areas. With some farm types, e.g. pigs and poultry, it is also helpful to have figures expressed per head of livestock going through the farm system (i.e. per head of throughput).
- It is worthwhile seeking specialist help if you are in any doubt on any of these points.

This type of assessment can help to identify problem areas for further investigation using your knowledge of your business and its production processes.

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- What possible action could you take to reduce high-cost areas? For example, would it be wise to alter policy on replacing machinery? If labour costs are too high, would it be cheaper to use contractors? Or, would it be a good idea to consult an adviser?
- Could you use the land, buildings and machinery differently to increase your net profit?

Summary of profit assessment

Activity

Circle your findings for each category of cost and profit to summarise your analysis so far.

My variable costs are:	Low	Medium	High
My labour costs are:	Low	Medium	High
My power and machinery costs are:	Low	Medium	High
My miscellaneous fixed costs are:	Low	Medium	High
My rent and finance costs are:	Low	Medium	High

The balance sheet

The balance sheet is vital for the owner of a business. It deals with the capital (all the money) invested in the business at one particular point in time, usually the last day of the financial year. It is made up of two lists – one showing the value of all the possessions (**assets**) in the business, and the other detailing the associated debts (**liabilities**). The owner's investment or stake in the business is called the net worth (**or** net capital **or** owner equity). Net worth is the amount left if all the assets are sold and all debts are repaid at the balance sheet values.

Net worth	Equals	Assets	minus	Liabilities
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Note that in balance sheets prepared for financial accounts, asset values in particular are often based on historical information. These values inevitably become out of date, quite rapidly in some cases, such as values of land and quota. It is, therefore, worthwhile continually re-assessing the values of assets shown in the balance to make sure they are realistic.

Activity

Identify the different types of assets and liabilities on your most recent balance sheet. A balance sheet can be presented in various ways, but the classification of assets (possessions) and liabilities (debts) will be as shown in the following example.

Assets		Home Farm £
Current assets (short term)		
Cash in the bank or in hand	(Liquid assets)	530
Debtors		26,694
Harvested crops in store	(Working assets)	136,758
Growing crops and cultivations		
Trading livestock		
Total current assets		163,982
Fixed assets (long term)		
Breeding stock		18,700
Machinery and equipment		103,814
Land and buildings		360,000
Total fixed assets		482,514
Total assets		(X) £646,496
Liabilities		Home Farm £
Current liabilities (short term)		
Sundry creditors		33,918
Bank overdraft		52,948
Total current liabilities		86,866
Long-term liabilities		
Mortgage		0
Loans		0
Hire purchase		0
Total long-term liabilities		0
Total liabilities		(Y) 86,866
Net worth		(X-Y) £559,630

The balance sheet for Home Farm looks very favourable. The current asset value is almost double the current liabilities. This indicates the business is in a strong position to fund the production cycle by financing inputs until the finished product is ready for sale. Home Farm also owns nearly half a million pounds' worth of long-term assets with no associated long-term debts.

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Using the farm balance sheet

The balance sheet can be easily used to assess:

- the long-term (overall) stability of the business;

Studying the balance sheet for a single year will not be of much help. It will tell you what you are worth now, but is this more or less than your worth last year and the year before? The trends in the figures are very important, and you would hope to see a stable or rising trend for your net worth, to show that your investment or stake in the business is not going down. A falling trend would show that you need to take action to get the business back on course.

Activity

Look at your balance sheets for the last three years to see what has happened to your net worth (also sometimes called net capital or owner equity). Circle your finding in the box below.

My net worth is:	Rising	Stable	Falling
------------------	---------------	---------------	----------------

Before you examine your balance sheets further, you need to take your most recent balance sheet and check the valuation of the assets to make sure they reflect current values. For example, land and livestock are often valued at their original cost. In the case of land, this may represent a severe undervaluation if values have risen since the date you bought it. Similarly, the milk quota may be undervalued or may not appear at all if it originally cost you nothing. Asset values may have risen or fallen since the date of purchase and this needs to be allowed for when assets are valued in the balance sheet.

Activity

Examine the valuations of your land, livestock, quota, crops in store, machinery and buildings on the most recent balance sheet to see if they reflect realistic values. If they do not reflect realistic values, revise them and enter the new 'Total asset' figure and your new 'Net worth' figure on your balance sheet. This net worth is the actual value of your capital invested in the business.

Overall (long-term) stability

- It may not be too serious if your business makes a loss rather than a profit in a particular year, as long as this does not become a regular trend.
- Just as profits can increase your wealth, losses reduce your wealth. In years of loss, personal drawings and tax will further reduce your capital in the business.
- Even when the business makes a profit, if your personal drawings plus taxation together are more than the profit, this will decrease the amount of your capital invested in the business. If this situation continues over several years, your capital stake in the business will be seriously reduced. The survival of your business could also be put at risk, so you need to take action sooner rather than later.

Percentage equity

- This will give you a quick guide to the overall stability of the business indicating the percentage owned by you.
- This ratio measures the proportion of total assets that you are funding with your capital in the business.
- Ideally, you should be able to fund around two thirds or more of the assets to withstand any short-term losses. In other words, the percentage equity should be at least 67%. This can be more difficult to achieve for tenants than for owner occupiers.
- Lenders are more likely to agree to provide more credit if your percentage equity shows you are funding around 70% of the assets of the business.

$$\text{Percentage equity} = \frac{\text{Net worth} \times 100}{\text{Total assets}}$$

← Net worth is also known as net capital or owner equity

Activity

Work out your percentage equity by filling in the unshaded boxes in the table below.

	Home Farm £		Your Farm £	
	£	Percentage equity	£	Percentage equity
Net worth (X)	559,630			
The total asset value (Y)	646,496			
$\frac{X}{Y} \times 100$		86.6%		%

In this example, the owner of Home Farm is funding around 87% of the assets, and borrowing finances the other 13% of the assets. Home Farm is fortunate because it does not carry any long-term debts and has a significant value of fixed assets in terms of land and buildings.

	Good	OK	Warning
Net capital	Rising	Stable	Falling
Percentage equity	Rising	Stable	Falling

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Possible future actions leading from your analysis of your farm business accounts.

Activity

After analysing your trading activities and capital situation, what action may you need to take to improve the performance and stability of your business? Review your findings and make a list of actions to consider.

Do you think you need to dramatically change your business plan, or just make small alterations to your current system, or maybe no alterations at all?

We explain the process of planning for change in part 2 of this series, '**Mapping out a farming future**'.

Glossary

Assets	Items that the business owns, which are partly financed by the owner and (often) partly by borrowing. Assets could be land, buildings, machinery, breeding and trading stock, harvested crops, growing crops and cultivations, debtors, and cash.
Balance sheet	A statement of the financial structure of the business at one point in time (normally the last day of the financial year). It lists assets and liabilities, and shows the difference as the owner's investment (or net worth).
Capital	The funds needed to run the business. The funds needed to finance the production cycle are called working capital. Fixed capital is invested in land, buildings, machinery and breeding livestock.
Cash flow	The flow of cash in and out of the business over a period of time, resulting in a cash surplus (profit) or deficit (loss) for each period, for example month, three months, year and so on.
Creditors	Someone you owe money to, for example, suppliers of materials or services. You must pay the money in the near future.
Debtors	People who owe you money which you will receive in the near future.
Depreciation	Spreading the net cost (i.e. purchase cost less estimated trade in value) of a capital item over its expected useful life. Depreciation is a non-cash item of expense, so profit does not truly reflect the amount of cash created through trading.
Enterprise	A specific farm activity, for example, feed barley, malting barley, dairy herd or livery.
Fixed costs	Any cost that is not attributed directly to an enterprise.
Gross margin	The difference between the gross output and the variable costs of an enterprise. It allows you to plan and monitor an enterprise while avoiding the difficulty of allocating fixed costs. As a result, it is not a profit figure.
Net margin	Gross margin less fixed costs.
Gross output	The full value of everything produced by an enterprise or a business, including subsidies.
Liabilities	The debts carried by the business as shown on the balance sheet.
Output	See 'Gross output'.

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Overdraft	A negative balance in the bank current account. Interest is only charged for money that is actually being used. Technically, it needs to be repaid when asked (but in practice often acts as a longer term loan).
Owner equity	See 'Net worth'.
Net capital	See 'Net worth'.
Net profit	The surplus of trading income over trading expenditure (spending). This surplus needs to cover personal drawings, tax and loan repayments if the business is to stay viable.
Net worth	The wealth invested in the business by the owner. It represents the difference between assets and liabilities, and is also known as net capital or owner equity.
Variable costs	Items of trading expenditure that can be allocated to a particular enterprise, and vary in scale depending on the size of the enterprise.

Reference sources for whole farm management data

(This list may not be exhaustive but has been compiled to the best of our knowledge at the time of publication)

Regional level data from the Farm Business Survey is published annually by the following FBS 'Centres':

Rural Business Research Unit
Askham Bryan College
Askham Bryan
York YO23 3 FR
Tel: 01904 772219

Rural Business Unit
Centre for Rural Economics Research
16-21 Silver Street
Cambridge CB3 9EP
Tel: 01223 337166

Centre for Rural Research
The University of Exeter
Lafrowda House
St German's Road
Exeter EX4 6TL
Tel: 01392 263836

Reference sources for whole farm management data

Farm Survey Section
Imperial College London
Wye Campus
Wye
Ashford
Kent TN25 5AH
Tel: 0207 594 2925

Centre for Agricultural, Food and Resource Economics
School of Economic Studies
Dover Street Building
The University of Manchester
Oxford Road
Manchester M13 9PL
Tel: 0161 275 4822

School of Agriculture, Food and Rural Development
University of Newcastle
Newcastle upon Tyne NE1 7RU
Tel: 0191 222 6900

Rural Business Research Unit
University of Nottingham
Sutton Bonington Campus
Loughborough LE12 5RD
Tel: 0115 951 6070

Department of Agriculture and Food Economics
The University of Reading
4 Earley Gate
Whiteknights
PO Box 237
Reading RG6 6AR
Tel: 01189 875123

Institute of Rural Studies
University of Wales, Aberystwyth
Llanbadarn Campus
Aberystwyth
Ceredigion SY23 3AL
Tel: 01970 622253

Farm Accounts in England
Farm and Animal Health Economics Division
Department for Environment, Food and Rural Affairs
Ergon House
17 Smith Square
London SW1P 3JR
Tel: 0207 238 3266
www.defra.gov.uk/esg/default.htm

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Farm Incomes in Scotland
Analytical Services Division
Scottish Executive Environment and Rural Affairs Department
Pentland House
47 Robb's Loan
Edinburgh EH 14 1TY
www.scotland.gov.uk

The Agricultural Budgeting and Costing Book
Agro Business Consultants Ltd
Freepost LE5272
2 Nottingham Street
Melton Mowbray
Leicestershire LE13 0BR
Tel: 01664 567676

The Farm Management Handbook
Farm Management Handbook Sales
Scottish Agricultural College
West Mains Road
Edinburgh EH9 3JG
Tel: 0131 535 4305

Farm Management Pocketbook
Imperial College London
c/o 2 Nottingham Street
Melton Mowbray
Leicestershire LE13 1NW
Tel: 01664 564508

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Environment and Rural Affairs Department

www.defra.gov.uk

www.scotland.gov.uk

