

Management accounting for farmers

Converting the farm's financial accounts into management accounts: a practical guide



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There are many sources of further help and advice on farm business management and related issues, these are listed below:

Useful contacts

Farm Business Advice Service – 0800 5874079

The Farm Business Advice Service is a free service set up to help farmers consider how the Single Payment Scheme affects their business. It is available to farmers in England until 31 March 2007. The advice is available to farmers who are claiming the Single Payment and is provided in the following ways.

- Information and advice by phone
- Local advice clinics
- Half-day farm visits by qualified farm business consultants
- Conferences and workshops (these may vary by region)

Natural England Land Management and Advisory Services – 0800 5874079

This manages how Defra-funded environmental and business advice is delivered to farmers, advisers and other land managers. The six advice programmes are managed nationally but are focused on meeting local needs. The unit provides a series of seminars, conferences, walks, farm visits and workshops to give advice on the following.

- Conservation
- Environment-sensitive farming
- Single payment scheme cross-compliance
- The Farm Demonstration Programme
- Catchment-sensitive farming

Business Link – 0845 600 9006

Business Link provides practical advice to all businesses and offers access to a wide network of business support organisations.

Forward Farming
Regional Farm Advice Unit
Barton Hall
Garstang Road
Broughton
Preston
Lancashire PR3 5HE
Phone: 01772 865285

Useful contacts – *continued*

Food Chain Centre at IGD
Grange Lane
Letchmore Heath
Watford
Hertfordshire WD25 8GD
Phone: 01923 857141

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
Phone: 01908 844710
www.redmeatindustryforum.org

British Institute of Agricultural Consultants
The Estate Office
Torry Hill
Milstead
Sittingbourne
Kent ME9 0SP
Phone : 01795 830100
E mail: info@biac.co.uk

Secretary, Farming and Rural Business Group
Institute for Chartered Accountants, England and
Wales
Chartered Accountants Hall
PO Box 433
Moorgate Place
London EC2 2BJ

Institute of Agricultural Secretaries and
Administrators
NAC
Stoneleigh Park
Kenilworth
CV8 2LG
Phone: 024 7669 6592

Department for Environment, Food and Rural
Affairs
Nobel House
17 Smith Square
London SW1P 3JR
Phone: 020 7238 6000

Foreword

In the modern farming environment understanding the business is just as important as understanding the farm. We cannot farm efficiently without a detailed knowledge of every aspect of the farm including soil types, rainfall, nutrient levels, slope and micro climate. We need to develop the same discipline when it comes to the financial aspects of the farm business. However, trying to do this from the annual farm accounts is not easy – particularly as those accounts commonly land on farm desks well after the financial year end. Using that data to create management accounts will take a little time to do but will reap rewards through the ability to have a more accurate picture of the business, its profitability and performance. Management accounts will allow for comparison with similar businesses or with published averages from data sources like DEFRA's Farm Business Survey. Following those comparisons action can be taken to play to the strengths of the business and deal with its weaker areas.

Management accounts will also provide the ability to keep one step ahead of those involved in the business be that the bank manager, landlord, suppliers or buyers. Having the management accounting data to hand will greatly assist in the inevitable negotiations that will be required with these individuals. Knowing the business as well as the farm will be essential to get the best deal for you in any of these negotiations.

I therefore commend this DEFRA guide for those who have yet to get a grasp of the concept of management accounts and for those who use them already but might pick up some useful extra tips to improve current practice.

A handwritten signature in black ink, appearing to read 'George Dunn', with a long horizontal flourish extending to the right.

George Dunn BA MSc ARAgS

Chief Executive

Tenant Farmers Association

Preface

To raise profits, farmers must measure the income of the business and identify its strengths and weaknesses. Which tools are available for this? Nearly all farms have financial accounts, which are normally prepared for tax purposes. While financial accounts can be quite helpful, they are much more valuable if you convert them into management accounts. This guide shows the steps involved.

The booklet is aimed at farmers, consultants, people who work in banking and similar areas serving agriculture and students of farm business management.

This booklet is the third in the 'Management Accounting for Farmers' series. The first two booklets were published under the joint title 'Figures for a Farming Future'. The first of these, 'Using the Farm Accounts to Point the Way', shows how to use financial accounts as a tool for managing the farm business. The second booklet, 'Mapping Out a Farming Future', introduces basic management accounting tools and techniques to plan changes to the business.

All these booklets are available free of charge from Defra Publications.

We have also developed a web-based 'benchmarking' programme that allows farmers to compare their financial accounts with results from similar farms. This free program, 'Farm Business Benchmarking Online', is available at:

www.farmbusinessbenchmark.defra.gov.uk

Introduction

It is not vital that you read this guide from cover to cover. It is a learning tool with a step-by-step approach, and even lightly reading the first few sections should give you a much better understanding of management accounting.

A farm's financial accounts are made up of a profit and loss account, a balance sheet and notes to the accounts, which describe the accounting policies used to prepare the accounts.

This booklet looks at the profit and loss account and shows the main differences between financial and management versions of this. The guide also describes the balance sheet and the flow of funds statement, which, while not always included in the farm's financial accounts, is a very valuable management account in itself.

The guide gives examples to show how accounts are set out and defines the terms used.

When you go through the booklet, there may well be areas where you need guidance on how important they are for your farm business. At this point, you should get advice from your accountant or farm management consultant. After reading this guide, you will have more knowledge about management accounting and you will be able to get more from the discussions you have with your accountant or consultant.

Section 1: The profit and loss account: the financial version compared to the management version

The profit and loss account shows the revenue, costs and profit from running the business over the financial year. The profit and loss account highlights the most important differences between financial accounting and management accounting.

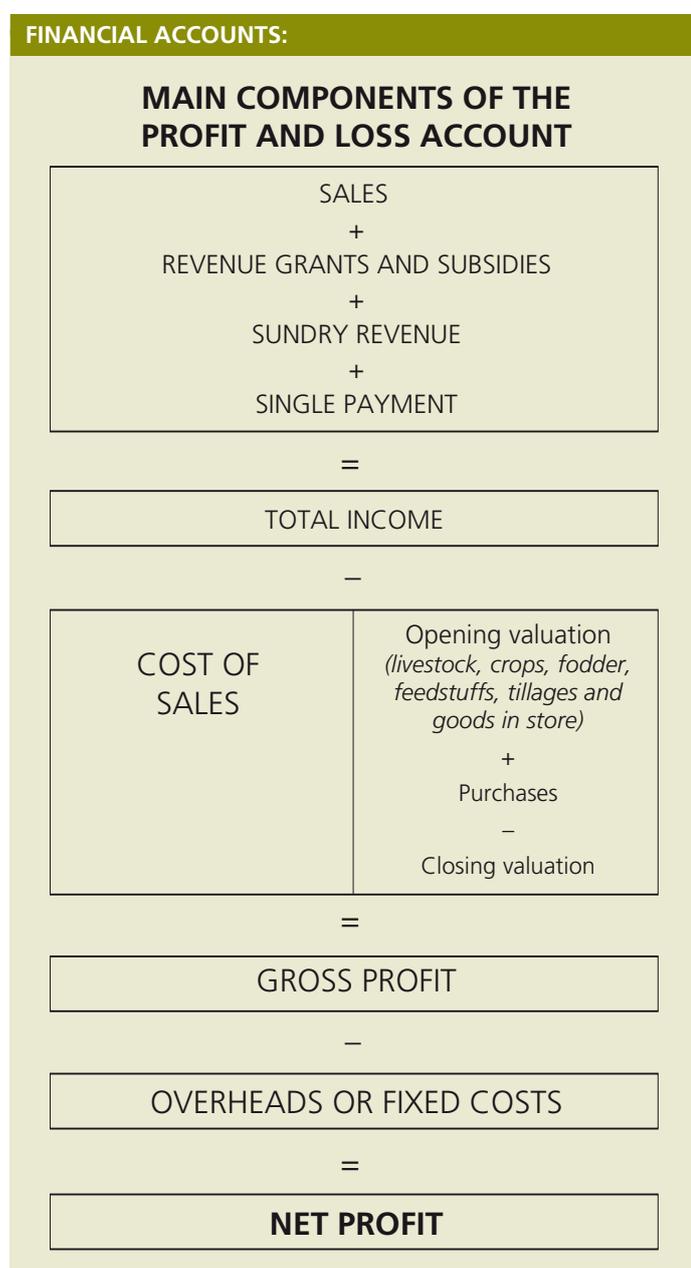
The major differences between the financial and management versions of the profit and loss account are as follows.

- The management account provides more information.
- Management accounts include an estimated rent against owned land.
- Management accounts include a cost against unpaid labour.
- In financial accounts, valuations of livestock and crops are usually based on production costs. In management accounts, they are normally based on their market value.

Section 2: The profit and loss account: the terms used in financial accounting

The first step in converting the profit and loss account from a financial into a management account is to understand the terms used in the financial version and how they fit together.

The diagram below shows the main terms and how these lead to net profit. There should be some similarities with your profit and loss account, although accounts do vary from farm to farm in their layout and detail. Each of the terms used in the diagram are explained over the page.



Section 3: Getting more out of the profit and loss account

The next step is to get more information from your profit and loss account.

Financial accounts vary from farm to farm in terms of their level of detail. Your accounts may not show all the items below. The less detail your account provides, however, the more you benefit from getting the extra information.

Below is a list of items which it is worthwhile to show separately on your profit and loss account. If you cannot find these on your account, ask your accountant or farm management consultant to set out your profit and loss account with the items shown separately.

Doing this is a major step to creating a management account as it will allow you to more accurately compare your business with other farms, for example, by using

'Farm Business Benchmarking Online' (www.farmbusinessbenchmark.defra.gov.uk).

Items that are worth showing separately on the profit and loss account

Sales – livestock, crops and fodder sales, including sales from producing and selling farm products.

Grants and subsidies from revenue, rather than capital. This includes payments from any agri-environment schemes, but does not include the single farm payment as this is recorded separately in the account. Capital grants and subsidies are normally included later in the account within overheads (fixed costs), usually within the figures for depreciation.

Sundry revenue is any general revenue, including income from rent, interest payments received, income from hiring out machinery and labour, recreation, tourist accommodation, catering, crafts, insurance receipts for any loss of income (for example, through crop damage), and revenue from other sources such as way leaves (granting access to land in exchange for payment). Insurance receipts for items other than loss of income (for example, property and machinery claims) are not included here. They are shown against the corresponding spending within overheads (fixed costs).

Single payment is revenue from the single decoupled payment (the single payment scheme in England). By showing this separately, it is easy to see how this contributes to net profit.

Cost of sales is the **opening valuation** plus **purchases** minus the **closing valuation**.

EXAMPLE OF COST OF SALES CALCULATION		£
Opening valuation		161,454
Purchases	Seeds and fertilisers	50,105
	Chemicals and sundry	55,609
	Feedstuffs and fodder	43,781
	Livestock	25,000
	Vet, medical and sundry livestock costs	5,904
Total purchases		180,399
Closing valuation		211,646
Cost of sales (opening valuation plus total purchases minus closing valuation)		130,207

Opening valuation is the value, at the start of the accounting period, of livestock, crops and produce in store, bought and home-grown feedstuffs and fodder, seeds, fertilisers, sprays and tillages (that is, cultivations and newly sown or growing crops). Livestock, crops and produce are valued at the cost of production or market value (after taking account of marketing costs). For valuing livestock, the cost of production usually equals the original cost to buy the animal, plus variable costs, plus paid labour up to the point of valuation. For crops, the cost of production usually equals seed, fertiliser and agrochemical costs, plus contract charges and the cost of paid labour, all up to the point of valuation.

Closing valuation is the value of the same items at the close of the accounting period.

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EXAMPLE OF OPENING AND CLOSING VALUATION

	Opening valuation	Closing valuation
Year end	Dec 31st £	Dec 31st £
Dairy cows	50,000	65,000
Rearing cattle	7,500	10,000
Wheat in store	50,000	75,000
Home grown fodder	2,000	3,000
Purchased fodder	500	500
Seeds and fertiliser	3,000	2,500
Chemicals and sundry	1,100	500
Feedstuffs	700	300
Veterinary and medical and sundry livestock items	500	1,000
Tillages (growing crops)	46,154	53,846
Total	161,454	211,646

- **Depreciation** of machinery, buildings, glasshouses and permanent crops
- **Other overheads**, such as water charges, subscriptions, advertising, telephone charges, pest clearance, travel and subsistence (farm share), stationery and so on
- **Profit on asset sales** is the profit or loss on the sale of machinery, glasshouses, fixed equipment, permanent crops (including orchards) and buildings. The profit or loss is the difference between the depreciated value of the asset at the opening valuation and the sale value if the asset is sold during the same year.

Purchases covers bought livestock, bought feed, seeds, fertilisers, chemicals, vet and medicine costs, and sundry items (such as baler twine, silage wrap, ear tags and packing materials).

Gross profit is sales, plus grants and subsidies, plus sundry revenue, plus single payment less the cost of sales.

More items that are worth showing separately on the profit and loss account are shown below.

Overheads (sometimes called expenses or fixed costs) are as follows.

- **Wages and salaries** (including casual labour)
- **Machinery repairs**
- **Fuel and oil for machinery**
- **Contract charges**
- **Other expenses for machinery** (includes renting or hiring machinery or similar arrangements, vehicle tax)
- **Rent**
- **Rates** (including drainage charges)
- **Property repairs**
- **Power, electricity and heat**
- **Professional fees** (including accountants' fees)
- **Interest and bank charges**
- **Insurance** (not including insurance for labour)

Section 4: The profit and loss account: working out your net farm income

The next step is to work out the net farm income for your business.

Doing this is another major step forward as it will:

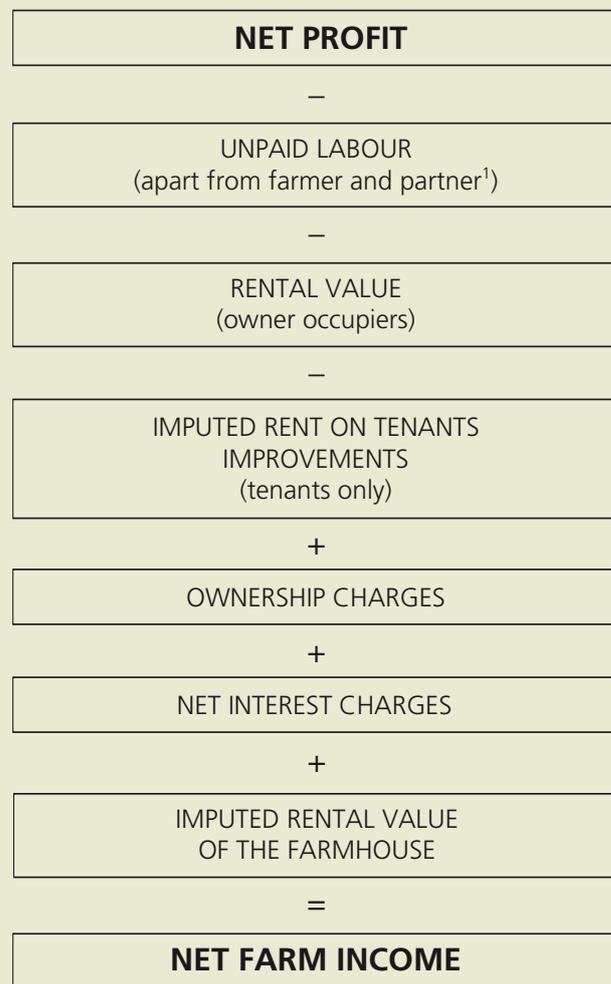
- allow you to better assess how well your business is performing by using published figures (most published results from the Farm Business Survey and other sources use net farm income to measure how a farm business performs);
- allow you to compare your farm with others, regardless of tenure or business organisation (for example, if the farm is run by a sole trader, business partnership or a company);
- for an owner-occupier, show the income the farm business produces over and above that which the owner-occupier could gain from renting the farm out (this can help when a farm is considering whether to continue in active farming or to rent the farm out to someone else); and
- show the income the farmer and partner¹ has left, after taking account of the cost of all other unpaid labour (that is, labour which is not shown as wages in the financial account but which the business is expected to fund through drawings or the private spending of those concerned).

As a result, net farm income shows how the business is performing after all resources are given a cost, other than the manual and managerial input of the farmer and partner¹.

The diagram shows the steps involved in working out net farm income from net profit.

Firstly, start with net profit from your financial accounts. To get to net farm income, you take away some items and add others as shown in the diagram over the page. Each of the terms used in the diagram are explained below it.

MOVING FROM NET PROFIT TO NET FARM INCOME



Looking at each item in detail, you take away the following from net profit.

Unpaid labour is the cost of unpaid labour, estimated using a wage rate that is appropriate to the work. The farmer and partner¹ are not included because net farm income represents the reward to them for their input into running the farm business.

Rental value (owner-occupiers) is an estimated rent charged against owned land and buildings. It is equal to the amount that a tenant would pay for a farm of similar size and type, taking into account the farmhouse, buildings, cottages and land and single payment entitlement that applies to the owned land. The single payment should be

1 Wife, husband, civil partner or someone the farmer lives with as if they were married.

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valued at the flat rate that will apply from 2012 onwards in the payment region that the farm falls into.

Imputed rent on tenants' improvements

applies to tenants only. It is the imputed rent for improvements the tenant has paid for, but which the landlord would normally pay for. This amount is taken away from net profit because net farm income treats all farms as if they were on a full tenancy, where the landlord would pay for all landlord-type improvements and would normally pass these costs on to the tenant through an adjustment to the rent.

The principle of using an imputed rent on tenants' improvements applies in real life with actual tenancies, when improvements the tenant has paid for are taken into account when the rent is reviewed. The value of the improvements is worked out, often by using an imputed rent. In these cases, the level of the imputed rent is worked out, as a percentage of what the improvement cost. Generally speaking, the larger and more valuable the improvement, the higher the percentage and the longer the period of time which the imputed rent applies for. Some improvements have an imputed rent for as long as the improvement is considered valuable.

However, to compare your farm's net farm income with published figures, you will need to follow the Farm Business Survey's approach to working out the imputed rent on tenants' improvements. In the FBS, imputed rent on tenants' improvements is worked out as 10% of the estimated cost (after taking any grants into account). For example, where a tenant has paid to install a new drainage system at a cost (without considering any grant) of £10,000, the imputed rent would be £1,000. Improvements are assumed to be written off after 10 years, so the imputed rent on improvements that are over 10 years old is zero. The only exceptions are purchased quota and purchased entitlement to single payment. In either case, these should not be written off for as long as they hold a market value.

To get to net farm income, the following items are added to net profit.

Ownership charges are the total charges for buildings depreciation, landlord-type repairs and buildings insurance. Ownership charges are

added to the net profit because net farm income 'assumes' all farms are run by tenants rather than owner-occupiers. As a result, it is not appropriate to take away the costs of farm ownership (that is, landlord-type costs) as well as the rental value. You might be able to identify the ownership charges from your financial accounts. Otherwise, you should get advice from your accountant or farm management consultant to identify what the amounts are.

EXAMPLE OF OWNERSHIP CHARGES

	£
Buildings depreciation	2,500
Buildings insurance	500
Landlord type repairs	10,000
Total ownership charges	13,000

Net interest charges is interest paid on all borrowings, net of any interest received. This is added back to net profit to avoid counting the same costs twice – it is not appropriate to take away interest on money borrowed to buy land and buildings if all the farm is already charged a rental value on owned land and buildings, just as if it were a tenancy.

Imputed rental value of the farmhouse

reflects the benefit to the farmer of living in the farmhouse. The imputed rental value is based on the rent that would apply to the property on the open market. This is added back to the net profit because net farm income is after the rent (or rental value) is taken away, which includes the farmhouse.

Other items to consider

Depending on your farm's circumstances and how your financial accounts have been prepared, you might also need to consider the following.

- Breeding livestock stock appreciation
- Adjustment to depreciation
- Change in unrealised profit

More information on these is provided in Appendix 1. Consult your accountant or farm management consultant before deciding how important these items are in your situation. Ignore them if they are not important.

Below is an example of how to work out your net farm income, starting with the net profit.

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This example includes breeding livestock stock appreciation, adjustment to depreciation and change in unrealised profit, although these might not be necessary for your business, as mentioned above.

Net profit	81,093
<i>minus</i>	
Unpaid labour (apart from farmer and partner ¹)	10,000
Rental value (owner occupiers)	25,000
Imputed rent on tenants improvements (tenants only)	5,000
Breeding Livestock Stock Appreciation	10,000
Adjustment to depreciation	8,500
<i>plus</i>	
Net interest charges	5,500
Ownership charges	13,000
Imputed rental value of farmhouse	5,000
Change in unrealised profit	20,000
<i>equals</i>	
Net Farm Income	66,093

Having worked out the net farm income of your business, how can you use this figure?

The main roles are those described at the beginning of section 4 – for example:

- for benchmarking – that is, comparing your farm's performance with other farms (most published results from the Farm Business Survey and elsewhere use net farm income to measure business performance);
- to show the income from farming, over and above that which could be gained from letting out the land and buildings; and
- to show the income remaining for the farmer and partner¹, after all other unpaid labour has been given a cost.

1 Wife, husband, civil partner or someone the farmer lives with as if they were married.

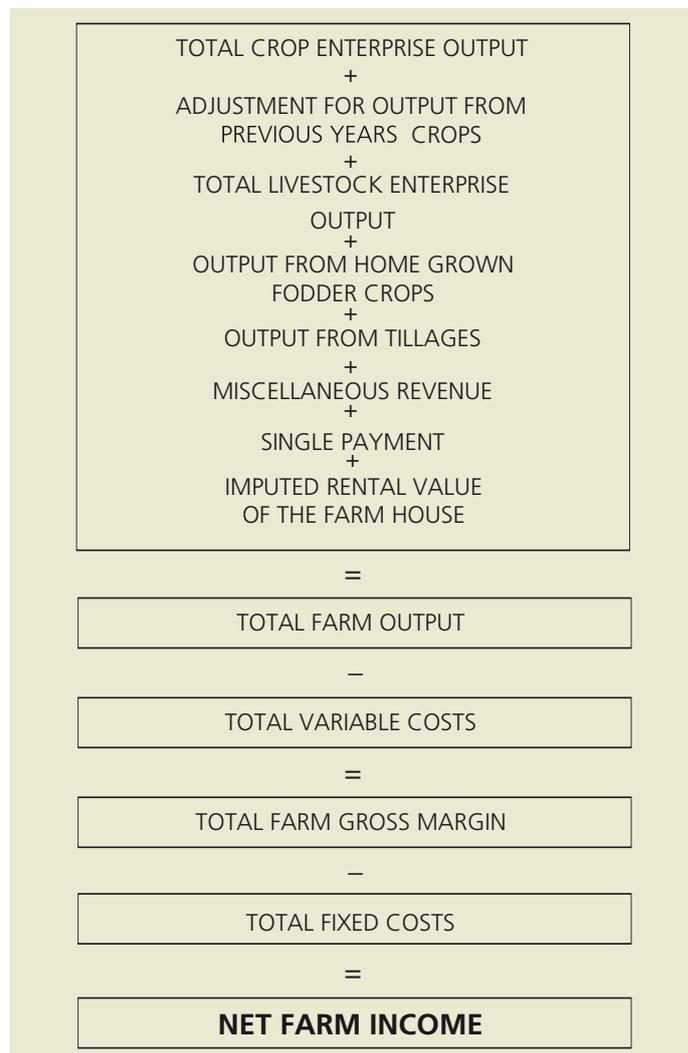
Section 5: The profit and loss account: more management accounting terms

The final step in converting the profit and loss account into a management account is to become familiar with management accounting terms. You will then be able to dig deeper and identify more of the business strengths and weaknesses by comparing your results with other farms and with published figures. Arable farmers will have the added advantage of being able to measure the output from each year's harvest separately.

Preparing these kinds of accounts is a specialist task and you will probably need some help from your accountant or farm business consultant.

To get the most benefit out of the records and to compare your farm's figures with others, it is vital to put each measure onto an appropriate unit value (for example, net farm income per hectare of total farm area, total fixed costs per hectare of total farm area, gross margin from milk production per dairy cow).

The most important terms and how they fit together are shown in the opposite diagram. This is followed by explanations of the terms.



The main point to note is that the management account treats the farm business as a collection of enterprises. For example, crops, livestock, miscellaneous revenue and the single payment are all enterprises and the management account is built up, enterprise by enterprise. As a result, you should start by working out the output from each enterprise, as shown in the examples below. You then put these together to build up the account for the whole business. Having done this, you can start to see the contribution each enterprise is making to your income.

More detailed descriptions are provided below.

Crop enterprise output means the output from a crop enterprise. It includes the value of crop fed on farm and straw used on farm. These should be valued at market prices.

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EXAMPLE OF CALCULATION OF CROP ENTERPRISE OUTPUT (wheat, 2005 harvest)

	£
Wheat sales	130,000
Wheat fed on farm	5,000
Value of unsold wheat in store	105,000
Straw sales and straw used on farm	0
Output	240,000

Crop enterprise output is worked out based on each harvest year and covers only the most recent harvest. This makes it much easier to compare one harvest with another, both on your farm and with other farms. For harvest years up to and including 2004, crop enterprise output includes the coupled subsidy payments, such as arable area payments. The single payment, paid from 2005 onwards, is not included in the crop enterprise output.

Total crop enterprise output is the enterprise output from all the crop enterprises on the farm from the most recent harvest.

Adjustment for output from the previous years' crops is the difference between the opening value of a crop in store from the previous harvest and its value when it is eventually sold. This adjustment is made because the output from each harvest is kept separate.

EXAMPLE OF ADJUSTMENT FOR OUTPUT FROM PREVIOUS YEARS CROPS

Year end	Dec 31st 2005 £
2004 harvest	
OV (crop in store at 1st Jan 2005)	60,000
CV (crop in store at 31st Dec 2005)	0
Sales and fed on farm	80,000
Output (CV + Sales – OV)	20,000
2005 harvest	
OV (crop in store at 1st Jan 2005)	0
CV (crop in store at 31st Dec 2005)	105,000
Sales and fed on farm	135,000
Output (CV + Sales – OV)	240,000
Adjustment for output from previous years crop (sale value of 2004 harvest crop less opening value of 2004 harvest crop).	20,000

Livestock enterprise output means the output from a livestock enterprise. If it is a breeding livestock enterprise, the output is the amount left after taking account of herd depreciation, as in the example of dairy enterprise output below.

EXAMPLE OF CALCULATION OF DAIRY ENTERPRISE OUTPUT

	£
Milk sales	108,000
Calf sales and transfers out of calves	0
Less herd depreciation	7,500
Output	100,500

EXAMPLE OF CALCULATION OF BEEF CATTLE ENTERPRISE OUTPUT

	£
Opening value	7,500
Finished cattle sales	15,000
Cattle purchases and transfers in	5,000
Closing value	10,000
Output (Sales + CV – purchases – OV)	12,500

The main parts of breeding livestock output are breeding livestock stock appreciation and herd depreciation. For more information on these, please see Appendix 2.

If it is a rearing enterprise, the output is sales, plus the closing value, less purchases and the opening value. There is an example above based on a beef finishing enterprise, but the same items (sales, purchases, closing value and opening value) apply to any other enterprise which involves rearing livestock. Opening and closing values are based on market prices.

In years up to and including 2004, livestock enterprise output includes the coupled subsidy payments, such as sheep annual premium, beef special premium and suckler cow premium. The single farm payment, paid from 2005 onwards, is not included in the livestock enterprise output.

Total livestock enterprise output is the enterprise output from all the livestock enterprises on the farm.

Output from home-grown fodder crops means the output from fodder such as home-grown hay and silage. In the opening and closing valuation, fodder stocks (for example, hay and silage in store) should be valued at market value. Sales include sales of standing fodder crops such as forage maize.

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EXAMPLE OF CALCULATION OF OUTPUT FROM HOME GROWN FODDER CROPS (for example, hay and silage)

	£
Opening value	2,000
Sales	4,000
Closing value	3,000
Output (Sales + CV – OV)	5,000

Output from tillages means the output from growing crops and cultivations. Growing crops and cultivations are valued, based on an estimate of variable costs, labour and machinery costs from when the cultivations started up to the point of valuation. For example, if a growing winter wheat crop is valued at 1 February, it is based on the labour, machinery and variable costs from when the initial cultivation was done the previous autumn, up to 1 February, including seed, fertiliser and sprays used on the crop over that time. Unless there has been a large change in the cropped area from one harvest to the next, or in the type of crops grown, the output from tillages is likely to be fairly small.

EXAMPLE OF CALCULATION OF OUTPUT FROM TILLAGES (that is, growing crops and cultivations)

	£
Opening value	46,154
Sales	
Closing value	53,846
Output (Sales + CV – OV)	7,692

Miscellaneous revenue is revenue from other sources that has been included in the net profit in the financial account. It includes:

- revenue from non-agricultural activities such as tourism and recreation, and renting out farm cottages and farm buildings;
- payments from agri-environment schemes and other support payments that are not specific to a particular enterprise;
- revenue from taking on contract work off the farm or hiring out machinery;
- revenue from renting out land or providing summer or winter grazing (keep).

Single payment is revenue from the single decoupled payment (the single payment scheme in England). This is shown separately, so that it is easy to see how it contributes to income.

Imputed rental value of the farmhouse. This reflects the benefit to the farmer of living in the farmhouse. This is not normally included in financial accounts but should be included in management accounts.

Total farm output is **total crop enterprise output**, plus **adjustment for output from previous years' crops** plus **total livestock enterprise output**, plus **output from home grown fodder crops** plus **output from tillages** plus **miscellaneous revenue** plus **single payment** plus **imputed rental value of the farmhouse**.

Variable costs are those costs that can be applied to a specific enterprise and will normally vary in line with the scale of that enterprise.

Examples of variable costs are fertilisers, sprays, seed, bought fodder, bought concentrates and home-grown concentrates.

EXAMPLE OF CALCULATION OF VARIABLE COSTS IN MANAGEMENT ACCOUNTS

	Opening valuation*	Purchases*	Closing valuation*	Cost in management account (OV+ Purchases-CV)
	£	£	£	£
Purchased fodder	500	4,000	500	4,000
Seeds and fertiliser	3,000	50,105	2,500	50,605
Chemicals and sundry	1,100	55,609	500	56,209
Purchased and home grown concentrate feeds	700	39,781	300	40,181
Vet, med and sundry livestock items	500	5,904	1,000	5,404

**Opening and closing valuations and purchases are equivalent to values in 'cost of sales' within the financial account.*

Total variable costs are all the variable costs added together. They equal total livestock enterprise variable costs, plus total crop enterprise variable costs, plus any variable costs set aside for another enterprise (for example, a diversified activity).

Enterprise gross margin is the enterprise output less enterprise variable costs.

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Total farm gross margin is the total farm output less total variable costs.

THE RELATIONSHIP BETWEEN ENTERPRISE GROSS MARGINS AND TOTAL FARM GROSS MARGIN	
<i>Enterprise outputs:</i>	
	£
Total farm output	434,692
of which	
Wheat output (2005 harvest)	240,000
Dairy output (excl BLSA)	100,500
Beef output	12,500
Output from home grown fodder crops	5,000
Output from tillages	7,692
Adjustment for output from previous years crops	20,000
Miscellaneous revenue	24,000
Single payment	20,000
Imputed rental value of farmhouse	5,000
<i>Variable costs:</i>	
	£
Total variable costs	156,399
of which	
Wheat (2005 harvest)	117,299
Dairy	23,460
Beef	10,948
Home grown fodder crops	1,564
Tillages	3,128
<i>Gross margins:</i>	
	£
Total farm gross margin	278,293
of which	
Wheat (2005 harvest)	122,701
Dairy	77,040
Beef	1,552
Home grown fodder crops	3,436
Tillages	4,564
Adjustment for output from previous years crop	20,000
Miscellaneous revenue	24,000
Single payment	20,000
Imputed rental value of farmhouse	5,000

Fixed costs (sometimes called overheads) are costs which cannot easily be put down to any one enterprise and do not vary in line with the scale of the enterprise. Many of the fixed costs in a management version of the profit and loss account are also in the financial account. As a result, most of the fixed costs have already been described at the end of section 3.

However, there are certain fixed costs which are only recorded in management accounts. These are as follows.

Tenant-type repairs means the cost of carrying out repairs to tenant-type items and repairs which a tenant would normally be responsible for. Examples are repairs to fencing, hedges, ditches and gates. Repair costs that a landlord would normally pay are not included, because net farm income assumes that all farms are tenanted.

Unpaid labour (apart from the farmer and partner¹) – this is described on page 7.

Rental value (owner-occupiers) – this is described on page 7.

Imputed rent on tenants' improvements – this is described at page 8.

Depreciation means spreading the cost of an asset over its useful life. However, you should be careful comparing depreciation in a management account with depreciation in a financial account. In management accounts, depreciation is worked out based on a current replacement cost and sometimes includes profit on asset sales. In financial accounts, depreciation is usually based on a historic cost and does not include profit on asset sales. See '**Adjustment to depreciation**' on page 22 for more information.

Machinery depreciation should include machinery bought under a hire-purchase or a finance leasing arrangement.

Remember, to compare your farm's figures with others, it is vital to put each measure onto an appropriate unit value (for example, net farm income per hectare of total farm area, total fixed costs per hectare of total farm area, gross margin from milk production per dairy cow). Your accountant or farm business consultant can help you do this.

Contract charges and casual labour – because these costs can be replaced with paid labour and machinery costs, in management accounts contract charges and casual labour are normally treated as **fixed** costs. This means that farms can be compared with each other on a consistent basis, for benchmarking purposes for example. However, when considering the farm business on its own, they can be classed as variable costs, because the scale of contracting charges and casual labour will depend on the scale of the enterprise.

1 Wife, husband, civil partner or someone the farmer lives with as if they were married.

Section 6:

The profit and loss account: reconciling the financial and management versions

The diagram over the page shows two profit and loss accounts – a financial account alongside a management version.

It shows how the various items fit together to produce net profit in the financial account and net farm income in the management version.

You will notice the amounts in the management account are not the same as in the financial version. The main reasons are shown below after each question.

1 Why does total farm output not equal total sales?

Total farm output includes the imputed rental value of the farmhouse, and opening and closing valuations, as well as sales.

2 Why are variable costs different to purchases (for example, seeds and fertilisers is £500 higher in the management account)?

In the management account, variable costs include the change in the opening and closing value of seeds and fertilisers in store.

3 Why is total variable costs different to cost of sales?

Cost of sales includes the change in the opening and closing value of livestock and crops in store.

4 Why is total farm gross margin different to gross profit?

As well as the reasons in the three questions above, you should also take account of the following.

- In the management account, output stocks (that is, the opening and closing values of crops in store and livestock on the farm) are valued at market prices rather than their production costs.
- Total farm gross margin does not include breeding livestock stock appreciation.

5 Why are tenant-type repairs different to property repairs and maintenance?

Tenant-type repairs do not include repairs that a landlord would be expected to carry out (for example, major repairs to the structures of buildings).

6 Why are other fixed costs different to other overheads?

Other fixed costs do not include buildings insurance (as this is a landlord-type expense).

7 Why is the depreciation amount different in the management account?

In the management account, depreciation:

- a is based on the current replacement cost rather than the historic cost;
- b does not include buildings depreciation (because buildings are a landlord-type asset and net farm income assumes all farms are run by tenants rather than owner-occupiers); and
- c includes profit or loss on asset sales.

8 Why are total fixed costs different to total overheads?

As well as the answers in questions 5 to 7 above:

- total fixed costs include the rental value of owned land and an imputed rent on tenants' improvements; and
- total fixed costs does not include interest charges.

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Profit and loss account: a financial account and a management account compared

FINANCIAL ACCOUNT		MANAGEMENT ACCOUNT	
Crop sales	215,000	Wheat output (2005 harvest)	240,000
Fodder sales	4,000	Adjustment for output from previous years crops	20,000
		Dairy output	100,500
		Beef output	12,500
Livestock sales	130,500	Output from home grown fodder crops	5,000
Grants and subsidies	0	Output from tillages	7,692
		Miscellaneous revenue	24,000
Sundry revenue	24,000	Single payment	20,000
Single payment	20,000	Imputed rental value of farmhouse	5,000
Total sales	393,500	Total farm output	434,692
Opening valuation	161,454		
<i>Purchases:</i>		<i>Variable costs:</i>	
Seeds and fertilisers	50,105	Seeds and fertilisers	50,605
Chemicals and sundry	55,609	Chemicals and sundry	56,209
Feedstuffs	39,781	Feedstuffs	40,181
Purchased fodder	4,000	Purchased fodder	4,000
Livestock	25,000		
Vet, medical and sundry livestock costs	5,904	Vet, medical and sundry livestock costs	5,404
Closing valuation	211,646		
Cost of sales	130,207	Total variable costs	156,399
Gross profit	263,293	Total farm gross margin	278,293
<i>Overheads:</i>		<i>Fixed costs:</i>	
Fuel	15,000	Fuel	15,000
Machinery, motor and contract	30,000	Machinery, motor and contract	30,000
Property repairs and maintenance	25,000	Tenant type repairs	15,000
Office and stationary	4,000	Office and stationery	4,000
Wages	60,000	Labour (paid) (excluding management)	60,000
		Labour (unpaid) (excluding farmer and spouse)	10,000
Bank charges	500	Bank charges	500
Interest	5,500		
Rent	15,000	Rent	15,000
		Rental value (owner occupiers)	25,000
		Imputed rent on tenants improvements	5,000
Accountancy and professional fees	5,000	Accountancy and professional fees	5,000
Other overheads	10,500	Other fixed costs	10,000
Depreciation	12,700	Depreciation (machinery, perm crops and glasshouse)	17,500
Less profit (loss) on sale of assets	1,000		
Total overheads	182,200	Total fixed costs	212,200
Net profit	81,093	Net Farm Income	66,093

Section 7: Management accounting: flow of funds statement

Role of the flow of funds statement

The flow of funds statement shows how your business has made its funds (source of funds) and where these funds have been spent (disposal of funds). It shows the importance of farm income as a source of funds compared to other sources such as sales of land or property, changes in the level of outstanding loans, changes in the level of short-term deposits (for example, savings accounts), and other funds introduced (for example, funds from a private source).

The 'disposals' show how the funds have been spent. For example, buying property or quotas, landlord-type improvements, buying or maintaining machinery, and non-farm spending, such as using the funds for private transactions. As a result, the 'disposals' show whether funds have been invested in the business on assets such as property, land and machinery, or have been invested outside the business or spent on private transactions.

Description of the flow of funds statement

'Sources' starts with the business' income (that is, net farm income). To work out the cash funds the business will have available over the year, the statement adds the following items to net farm income.

- a Non-cash costs taken away to work out the net farm income (for example, depreciation of machinery and fixed equipment).
 - b Imputed charges taken away to work out the net farm income, for example, unpaid labour, rental value (owner-occupiers), and imputed rent on tenants' improvements.
 - c Money received from selling 'property' (that is, land, buildings and quota), and from compensation.
 - d Change in short-term deposits (for example, savings accounts) between the start and end of the accounting year. The change in short-term deposits can be positive or negative. An increase in deposits means the source of funds will drop and the change in deposits has a negative value. On the other hand, a decrease in deposits means the source of funds will increase and the change in deposits has a positive value.
 - e Change in outstanding loans between the start and end of the accounting year. (An increase in outstanding loans means the source of funds will increase, and a decrease in outstanding loans means the source of funds will drop.)
 - f Other funds introduced where these are not already included in net farm income, for example, grant revenue not already included in income, sales of business assets such as shares in co-operatives, funds transferred into the business from off-farm investments or from private sources, and other general funds.
- Having worked out the total sources of funds, the next step is to look at 'disposals'. The disposals section covers items that must be taken away from sources of funds to get the net position (that is, surplus or deficit).
- a The first item within disposals is the valuation change between the start and close of the accounting period. This is the change in value of livestock (not including BLSA), bought goods in store, stocks, forage and cultivations. The valuation change can be positive or negative. The valuation change is treated as a disposal and, as a result, taken away from sources of funds. This is because it is a non-cash item that is included in net farm income but has to be taken away from income to get the cash position.
 - b Imputed rental value of the farmhouse – this is taken away because it is an imputed part of output and net farm income.
 - c Capital spending, for example, buying property, land, woodland, milk quota, entitlements to single payment and investment in landlord-type improvements (investment in buildings and improvements the occupier or tenant makes, after taking account of sales and grants).
 - d Ownership charges, as described on page 8.
 - e Interest payments.

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- f Spending on machinery and equipment, after sales of machinery and equipment, and grants.
- g Spending on non-farm items, for example, private transactions or tax.
- h Funds transferred out of the business.

The difference between total sources and total disposals is a surplus if the total sources are greater than the total disposals, or a deficit if the total disposals are greater than the total sources. In the following example, there is a surplus.

EXAMPLE OF A FLOW OF FUNDS STATEMENT			
Sources of funds	£	Disposals	£
Net Farm Income	66,093	Valuation change excluding BLSA (livestock, crops, purchased stocks/stores, forage and cultivations)	40,192
		Imputed rental value of farmhouse	5,000
Depreciation (machinery and fixed equipment)	20,200	Purchases of property/quotas	40,000
Unpaid labour (excluding farmer and partner ¹)	10,000	Net landlord type capital improvements	1,000
Rental value (owner occupier)	25,000	Ownership charges	13,000
Imputed rent on tenants improvements	5,000	Interest payments	5,500
Sales of property and compensation	30,000		
Change in short-term deposits	-5,852	Net expenditure on machinery and equipment	6,000
Change in loans outstanding	10,000	Non-farm items (including private drawings)	20,000
Other funds introduced	4,591	Funds transferred out	1,000
Total sources	<u>165,032</u>	Total disposals	<u>131,692</u>
Deficit	<u>-</u>	Surplus	<u>33,340</u>

1 Wife, husband, civil partner or someone the farmer lives with as if they were married.

Section 8: Reconciliation of flow of funds

Role of the reconciliation of flow of funds

The reconciliation of the flow of funds shows how the surplus or deficit from the flow of funds has had an effect on the financial assets and financial liabilities of the business. The effect is a change between the opening and closing valuations in one or more of:

- the bank balance;
- cash in hand;
- the amount debtors owe you; and
- the amount you owe the creditors.

Reconciliation of flow of funds is a useful tool when deciding how to manage your financial assets and liabilities, particularly those assets which are most under the business control. For example, if there is little change between the opening and closing valuation in the amount debtors owe you and the amount you owe creditors, the surplus or deficit from the flow of funds will appear as a change in the bank balance, cash in hand or both. This will help you decide whether you should repay or extend credit.

Description of the reconciliation of the flow of funds

To complete the reconciliation of the flow of funds, the opening and closing values are listed for each of the following – bank balance, cash in hand, debtors and creditors. The change between the opening and closing values (that is, the closing value less the opening value) for each of these items is also listed.

To reconcile, the surplus (or deficit) from the flow of funds statement must equal the change in bank balance, plus the change in cash in hand, plus the change in debtors, less the change in creditors.

An example is set out below.

EXAMPLE OF RECONCILIATION OF FLOW OF FUNDS		
	Opening value (£)	Closing value (£)
Bank balance	1,000	34,793
Cash in hand	530	600
Debtors	1,769	1,800
Creditors	40,446	41,000
Change in bank balance	–	33,793
PLUS change in cash in hand	–	70
PLUS change in debtors	–	31
LESS change in creditors	–	554
Equals surplus from flow of funds statement		33,340

Taken together, the flow of funds statement and reconciliation of flow of funds tie up 'loose ends' by taking account of where the funds come from (sources), where they go (disposals) and the effect they have on the financial assets and liabilities of the business (reconciliation).

In the example above, the surplus from the flow of funds statement has mainly appeared as a change in the bank balance, rather than a change in cash in hand, debtors or creditors. It would probably be in this business's interest to use the surplus to pay off creditors rather than to increase the bank balance. This is because the interest charges saved through paying off creditors would outweigh any interest received through the funds in the bank balance. In this example, the reconciliation of flow of funds has, because of this, flagged up a course of action the business should take.

Section 9: Management accounting: the balance sheet

The balance sheet is vital if you own a business. It shows the capital (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 sections – one showing the value of all the possessions (**assets**) in the business, and the other showing the relevant debts (**liabilities**). Your investment or stake in the business is called the net worth (**or** net capital **or** owner equity). Net worth is the amount that would be left over after assets have been sold so that all the debts have been repaid at the values on the balance sheet.

EXAMPLE OF A BALANCE SHEET		
Assets	Opening value	Closing value
	£	£
Fixed assets		
Land	1,500,000	1,611,000
Buildings	25,000	22,500
Fixed equipment	45,000	40,500
Plant, machinery and vehicles	52,000	54,800
Permanent crops	3,000	3,000
Tenant's quotas etc	60,000	40,000
Breeding stock	50,000	65,000
Total fixed assets	1,735,000	1,836,800
Current assets		
<i>Liquid assets</i>		
Cash in bank	1,000	34,793
Cash in hand	530	600
Debtors	1,769	1,800
Short term deposits	4,148	10,000
<i>Working assets</i>		
Harvested crops in store	52,000	78,000
Feedstuffs and goods in store	5,800	4,800
Growing crops and cultivations	46,154	53,846
Trading livestock	7,500	10,000
Total current assets	118,901	193,839
Total assets	1,853,901	2,030,639
Liabilities		
	Opening value	Closing value
Current liabilities		
Sundry creditors	40,446	41,000
Bank overdraft	0	0
Total current liabilities	40,446	41,000
Net current assets	78,455	152,839
Long term liabilities		
Mortgage	200,000	200,000
Loans	70,000	80,000
Hire purchase	14,000	14,000
Total long term liabilities	284,000	294,000
Total liabilities	324,446	335,000
Net worth	1,529,455	1,695,639
Change in net worth		166,184

Section 10: Terms used in the balance sheet

- 1 **Fixed assets** are assets which represent relatively long-term investments that are used for more than one production cycle. Examples are breeding livestock, plant and machinery, land, buildings, quotas and entitlement to the single payment. Machinery bought under a hire-purchase or a finance leasing arrangement should be included. The business might not legally own this machinery, but it does own the right to use the machinery.
- 2 **Current assets** are assets which will normally be converted into cash within a short space of time (generally a year or less). Examples are livestock (other than breeding stock), harvested and growing crops, stocks of produce from livestock and items such as seed, feed, fertilisers and veterinary products. Current assets also include cash in hand or in the bank and sundry debtors.
- 3 **Current liabilities** are claims on the business which may have to be met within a short period of time, usually not longer than a year. Examples include sundry creditors, bank overdrafts, short-term loans and payments which are still to be made for machinery bought under a hire-purchase or a finance leasing arrangement.
- 4 **Long-term liabilities** are loans, mortgages and other debts which will not normally have to be paid earlier than expected. Examples include Agricultural Mortgage Corporation mortgages, bank loans, and private and family loans (whether bearing interest or not).
- 5 **Net current assets** are the current assets less current liabilities.
- 6 **Net worth (also known as owner equity or net capital)** is the value of assets available to the business after all other claims against these assets have been met.

Section 11: Using the balance sheet

The balance sheet is vital if you own a business. It deals with the capital invested in the business at one particular point in time, usually the last day of the financial year.

You should be aware that, in balance sheets prepared for the financial accounts, asset values in particular are often based on information collected in the past. These values, such as values of land and quotas, become out of date, quite quickly in some cases. As a result, it is worthwhile to continually reassess the values of assets shown in the balance sheet to make sure they are realistic.

The balance sheet can be used to assess how stable the business will be in the long-term.

Studying the balance sheet for a single year will not be very helpful. It will show the net worth now, but is this more or less than it was last year and the year before? The trends in the figures are very important, and you would hope to see a steady or rising trend in the net worth of your business, 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.

Before you examine your balance sheet 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. With land, this may be severely undervalued if values have risen since the date you bought the land. 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 you bought them and you need to take account of this when assets are valued in the balance sheet.

Examine the valuations of your land, livestock, quotas, crops in store, machinery and buildings on the most recent balance sheet to see if they are realistic values. If they are not realistic values, change them and enter the new 'Total asset' figure and the new 'Net worth' figure on the balance sheet. If you own the business, the net worth is the actual value of the capital stake that you have in the business.

How stable your business is overall (long-term)

- 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 happen regularly.
- Just as profits can increase your wealth, losses reduce your wealth. In years when your business makes a loss, this will reduce the capital that you have in the business.
- Even when the business makes a profit, if your personal transactions and tax are more than the profit, this will also reduce your capital. If this situation continues over several years, your capital will drop significantly. Your business could also be at risk, so you need to take action sooner rather than later.

Percentage equity

- This shows, as a percentage, how much of the business you own. It will give you a quick guide to how stable the business is overall.
- The percentage equity measures the percentage of total assets that you are funding with the capital you have invested in the business.
- Ideally you should be able to fund around two thirds or more of the assets to take account of any short-term losses. In other words, the percentage equity should be at least 67%. Tenants may find this more difficult to achieve than owner-occupiers.
- To work out the percentage equity, you divide the net worth by the total assets, then multiply that figure by 100.

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

Appendix 1

More information about getting to net farm income from net profit

When working out net farm income from net profit, depending on your farm's circumstances and how your financial accounts have been prepared, you may need to consider the following.

- Breeding livestock stock appreciation
- Adjustment to depreciation
- Change in unrealised profit

More information on these is set out below. Talk to your accountant or farm management consultant before deciding how important these items are in your situation. You can ignore them if you do not think they are important.

In working out the net farm income, the first two items, **breeding livestock stock appreciation** and **adjustment to depreciation** are taken away from net profit. **Change in unrealised profit** is added to net profit.

Breeding livestock stock appreciation (BLSA) is the change in value of breeding livestock between the start and end of the year. This is due to the general movement in market prices rather than the quality or age of the herd changing. BLSA can be positive or negative. BLSA is normally included in net profit, but it is never included in net farm income. This is to prevent changes in breeding livestock values affecting trading income. Most farmers and consultants do not consider changes in the paper valuation of breeding livestock as part of trading income, because breeding livestock represent a long-term investment and changes in value are not really relevant to the trading account. In your financial account, the amount of BLSA included in net profit will depend on the method your accountant or consultant uses to value the breeding animals. You may need to consult your accountant or consultant to decide on how significant the level of BLSA is and whether you need to make an adjustment for BLSA.

Adjustment to depreciation – depreciation is spreading the cost of an asset over the asset's useful life. It is worked out for machinery, buildings, glasshouses and orchards. Depreciation is included in financial and management accounts. You will need to make an adjustment to depreciation if depreciation in the financial account is not based on the same values as in a management account. This is often the case, because of two reasons.

- 1 In financial accounts, depreciation is often based on the historic cost where the asset's original cost depreciates (falls) each year. However, in management accounts, it is always based on a current replacement cost to allow for inflation with, for example, new or used machinery prices. Depreciation based on the current replacement cost gives you a better idea of the level of money the business needs to invest in machinery each year to maintain the current machinery the business has.

BREAKDOWN OF DEPRECIATION OF PLANT, MACHINERY AND VEHICLES

	Financial account	Management account
Year end	December 31st	December 31st
	£	£
Opening valuation	42,000	52,000
Revaluation increment	–	10,000
Purchases	8,000	8,000
Depreciation rate (%)	20	20
Depreciation before profit (loss) on asset sales		
Plant, machinery and vehicles at op. valuation (OV + revaluation increment) x 20%	8,400	12,400
Purchases* (purchases x 0.5) x 20%	800	800
Total depreciation	9,200	13,200

* Purchases are multiplied by 0.5 as it is assumed that purchases are on the farm for half of the year, on average.

- 2 The second reason is a difference in how profit on asset sales is treated. In financial accounts, the profit on asset sales is often shown as an overhead cost, separate from depreciation. In management accounts, however, it should be included when working out depreciation. For more information on profit on asset sales, see page 6.

The adjustment to depreciation is the amount that has to be taken away from net profit to allow for the difference in depreciation between the financial and management accounts, after allowing for current replacement cost and profit on asset sales. Consult your accountant or farm management consultant to decide if you will need to make an adjustment for depreciation. It might be that, for your business, this kind of adjustment would be small and not worth making.

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In the example below, the adjustment to depreciation is large (£8,500) and this will have to be taken from net profit when working out net farm income.

EXAMPLE OF ADJUSTMENT TO DEPRECIATION		
	Financial account	Management account
Year end	December 31st	December 31st
Depreciation method of calculation	Historic cost	Current replacement cost
	£	£
Opening valuation		
Plant, machinery and vehicles	42,000	52,000
Fixed equipment	30,000	45,000
Buildings	5,000	25,000
Purchases		
Plant, machinery and vehicles	8,000	8,000
Fixed equipment	0	0
Buildings	0	0
Revaluation gain* (£)		
Plant, machinery and vehicles	–	10,000
Fixed equipment	–	0
Buildings	–	0
Sales		
Plant, machinery and vehicles	1,000**	2,000
Fixed equipment	0	0
Buildings	0	0
Depreciation rate (%)		
Plant, machinery and vehicles	20	20
Fixed equipment	10	10
Buildings	10	10
Depreciation (£)		
Plant, machinery and vehicles	9,200	13,200
Fixed equipment	3,000	4,500
Buildings	500	2,500
Closing valuation***		
Plant, machinery and vehicles	39,800	54,800
Fixed equipment	27,000	40,500
Buildings	4,500	22,500
Depreciation before profit (loss) on asset sale (£)	12,700	20,200
Profit (loss) on asset sale**		
Plant, machinery and vehicles	1,000	
Fixed equipment	0	
Buildings	0	
Depreciation after profit (loss) on asset sale	11,700	20,200
Adjustment to depreciation (£)		8,500

* Revaluation gain (or loss if a negative value) is the amount by which the replacement value of the asset has risen (or fallen) during the accounting year due to movements in average market prices for that particular asset.

** For this example, sale value in financial account is entered as value at opening valuation (£1,000) and therefore excludes £1,000 profit on sale (actual sale revenue is £2,000).

*** Closing value = Opening value + purchases + revaluation gain – sales – depreciation

Unrealised profit is the difference between profit based on valuing livestock and crops in store at market value and profit based on valuing using production costs. Generally, in financial accounts, valuations are based on production costs. In management accounts, they are based on market value, after taking account of the estimated cost of marketing.

Change in unrealised profit is the difference in unrealised profit between the opening and closing valuation. When converting a financial account into a management account, the change in unrealised profit is added back to net profit. In the example below, the change in unrealised profit is £20,000.

EXAMPLE OF CALCULATION OF CHANGE IN UNREALISED PROFIT		
	Financial account	Management account
Year end	December 31st	December 31st
	£	£
Wheat in store at opening valuation (t)	1,000	1,000
Value of wheat in store at opening valuation (£/t)	50	60
Value of wheat in store at opening valuation (£)	50,000	60,000
Unrealised profit at opening valuation (£)	0	10,000
Wheat in store at closing valuation (t)	1,500	1,500
Value of wheat in store at closing valuation (£/t)	50	70
Value of wheat in store at closing valuation (£)	75,000	105,000
Unrealised profit at closing valuation (£)	0	30,000
Change in unrealised profit (unrealised profit at closing valuation less unrealised profit at opening valuation)	0	20,000

Appendix 2

Breeding livestock stock appreciation and herd depreciation – what are they? why are they important?

Breeding livestock stock appreciation (BLSA) is the change in value of breeding livestock between the start and end of the year. This is due to general movement in market prices rather than the quality or age of the herd changing. BLSA can be positive or negative.

EXAMPLE OF BREEDING LIVESTOCK STOCK APPRECIATION			
	Number	£ per head	Total £
Opening value of dairy herd	100	500	50,000
Closing value of dairy herd	100	650	65,000
Change in value			15,000
Of which, change due to BLSA			10,000
Change due to other reasons*			5,000
* Change due to other reasons' could include: a change in the genetic quality of the herd, a change in the average age of the herd or a change in the way that the cows are managed (which could, for example, lead to a change in the cull weight).			

BLSA is not included in net farm income or livestock enterprise output. This is to prevent changes in paper values of breeding livestock affecting trading income. Breeding livestock represent a long-term investment and changes in value are not relevant to how the business performs.

However, in management accounts, BLSA does have an important role in that it allows **herd depreciation** and breeding livestock output to be worked out properly.

Herd depreciation is spreading the cost of a breeding animal over its useful life. Like any other working asset, breeding animals lose value as they move nearer to the stage when they have to be culled. As a result, herd depreciation is the animals fall in value over the accounting period as each animal moves nearer to the end of its productive life.

To work out herd depreciation, you need the opening and closing values of the herd along with an estimate of the BLSA. The BLSA depends on the method your accountant or consultant uses to value the breeding animals. You will probably need to consult your accountant or consultant to get an estimate of the level of BLSA for each breeding livestock enterprise.

Herd depreciation is then worked out by using the following formula.

Herd depreciation equals **opening value** plus **purchases and transfers in** plus **BLSA** minus **sales and transfers out** minus **closing value** (where the closing value includes BLSA).

The example below shows how herd depreciation is worked out for a dairy herd.

CALCULATION OF HERD DEPRECIATION	
	(£)
Opening value of herd	50,000
Purchases and transfers in (25 freshly calved heifers at £800)	20,000
BLSA	10,000
Sales and transfers out (25 culls at £300)	7,500
Closing value (including BLSA)	65,000
Herd depreciation (Op Val + purchases & trans in + BLSA – sales & trans out – Cl Val)	7,500
Average no of cows in herd	100
Herd depreciation per cow	75

Valuing animals

To work out herd depreciation properly, you should develop a system to value the herd properly and carefully. It is worth dividing the herd into different age groups, as in the example below. Consider factors such as quality and age, including how the average quality and age of the herd has changed over the year. Then consider BLSA. You should aim to get a realistic market value of the herd, at the opening and closing valuation and to decide how much of the change in value is BLSA.

EXAMPLE OF HERD VALUATION SHOWING NUMBERS OF COWS AND THEIR VALUES				
	Opening valuation		Closing valuation	
	No	Val	No	Val
Cows midway through first year in herd	25	725	25	838
Cows midway through second year	25	575	25	713
Cows midway through third year	25	425	25	588
Cows midway through fourth (and final) year	25	275	25	463
Average value (all cows)	100	500	100	650
Total per herd		50,000		65,000

Converting the farm's financial accounts into management accounts: a practical guide

The table below shows how the value of the cows in the previous table changes between the opening valuation and the closing valuation because of BLSA and reasons other than BLSA.

Examples of reasons other than BLSA are changes in how the herd is managed, such as more accurate milk recording or achieving higher prices for culled cows. In the example below, the farm is

achieving higher cull prices because of a change in how the herd is managed, and this has a greater effect on the older cows as they approach the culling stage.

As the table shows, BLSA has an effect on the values of all age groups in the herd, not just the older ones.

OPENING AND CLOSING VALUES AND VALUATION CHANGES BY DIFFERENT AGE CATEGORIES

	Opening Value	Valuation change due to reasons other than BLSA	Valuation change due to BLSA	Closing value excluding BLSA	Closing value including BLSA
Cows in first year (per head)	725	13	100	738	838
Cows in second year	575	38	100	613	713
Cows in third year	425	63	100	488	588
Cows in fourth (and final) year	275	88	100	363	463
Average (all cows)	500	50	100	550	650
£ per herd	50,000	5,000	10,000	55,000	65,000

Have you worked out herd depreciation correctly?

Having worked out the depreciation of your herd, you can quickly check the answer as follows. Consider the value of a typical freshly calved heifer going into the herd for the first time, then deduct the value of a typical cull, valuing the cull *at the same point in time* that you value the

freshly calved heifer. Divide the result by the typical lifetime of a cow in your herd, and the answer should be reasonably close to the figure you have worked out using the more thorough method, which takes account of BLSA.

An example would be £900 (freshly calved heifer) minus £400 (cull) divided by 5 years, = £100 depreciation for each cow.

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