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# Business Planning, Understanding Farm Accounts and Benchmarking

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# Objectives

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- What is business planning?
- Why have a business plan?
- To highlight strengths and weaknesses
- To understand financial aspects of the business
- To understand how to analyse whole farm financial performance
- To discuss how we assess enterprise performance
- Identify the Key Performance indicators
- To identify objectives
- To consider options and actions

# Business Planning – Getting started

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‘Success in business comes as a  
result of planning’

# Question

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- How do you forward plan your own businesses?

# Why plan?

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- The process of planning helps you to:
  - Assess and manage risk
  - Identify resource implications
  - Provides a framework for day to day decision making
  - Helps everyone in your business pull together in the same direction (provided that they are informed of the plan!)
- Operators manual for the business

# Farm Business Planning – The Process

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# Where are you now? - SWOT Analysis

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Understanding and identifying:

Strengths	Weaknesses
Opportunities	Threats

Why?

- Helps to focus on areas where you are strong and where greatest opportunities lie while making you aware of weaknesses and threat helping you to work towards minimising these.

# SWOT analysis

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- Exercise - whole group



# Strengths

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- What are your advantages?
- What do you do well?
- What do other people see as your strengths?
- Consider this from your own point of view & from the point of view of others you deal with
- Don't be modest, be **REALISTIC**

# Weaknesses

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- What could you improve?
- What do you do badly?
- What should you avoid?
- Consider from internal/external basis. Do others perceive a weakness that you don't see?
- Are your competitors doing anything better than you?
- Face up to REALISM now

# Opportunities

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- Where are the opportunities open to you?
- What are the interesting trends you are aware of?
- What new skills & capabilities could you acquire?
- How do you become unique?

# Threats

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- What obstacles do you face?
- What is your competition doing?
- Are the required specifications for your job, products changing?
- Is changing technology threatening your position?
- Do you have bad debt/cashflow problems?

# Farm Accounts Analysis

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# Accounts are your business

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- Capture in figures how you performed
- Three key elements
  - Cash flow
  - Profit
  - Capital
- Only latter two normally shown in accounts



# Financial Evaluation Techniques

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- Profit and Loss Analysis
- Balance Sheet Analysis
- Cash Needs
- Benchmarking tools
  - Gross Output Analysis
  - Comparative Analysis
  - Enterprise and technical performance analysis

# Tax Accounts

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- A set of accounts prepared at the end of each year, for tax and management purposes, must contain the following:
  - Profit & Loss Account
  - Balance Sheet
  - Capital Account

# Profit & Loss Account

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- Measure of success over a given period usually 1 year
- Calculated on accrual basis adjusted for debtors, creditors, prepayments and accruals
- Adjusted for changes in stock valuations
- Linked to:
  - Gross Output Accounts
  - Depreciation Schedule

# Balance Sheet

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- Estimation of business worth at a particular point in time - usually the financial year end
- Assets – fixed and current
- Liabilities – Long term and current
- Net Worth – Assets minus Liabilities

# Capital Account

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- Often shown on the same page as the balance sheet
- Squares the P&L account with the Balance Sheet
- Balance brought forward + profit – drawings = Net Worth

# Watch !!!!

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- Provides a “snapshot”
  - Look for trends (i.e. view over a few years)
  - Look for seasonal fluctuations (overdraft)
- Tax (not management) accounts
  - Costs aggregated
  - Adjustments for debtors, creditors, prepayments and accruals
  - Valuations (livestock, land)
- Historical

# Exercise

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- A Farm
- Tenanted
- Beef and Sheep
  - 100 sucklers
  - 570 ewes
- Upland
  - Arable area – 50 ac
  - PGRS – 500 ac
  - RGR – 900 ac (adj. 4:1)
- 1 full time worker

# P&L Exercise

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- Using the tax accounts for A Farm, prepare a P&L summary.





# Profit and Loss Account Analysis

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- Gross Output
- Variable Costs
- Gross Margin
- Fixed Costs
- Gross Profit
- Rent and Finance
- Net Profit (Loss)

# Gross Output

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Gross Output

=

Sales (including debtors) + Closing Valuation

-

Stock Purchases (including creditors) + Opening Valuation

# Gross Output Example

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	2016	2015	2014
CATTLE			
Sales	116,255	116,882	115,981
Subsidies	4,312	4,255	3,990
Stock at end	270,092	286,518	295,473
	390,659	407,655	415,444
less			
Purchases	12,155	3,350	22,931
Stock at start	286,518	295,473	291,424
	298,673	298,823	314,355
Output to Profit and Loss Account	91,986	108,832	101,089

# Variable Costs

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- Feed
- Forage
- Fertiliser & Lime
- Seeds
- Sprays
- Vet & Medicine
- AI
- Dairy Expenses
- Silage Sheet/Wrap
- Clipping/scanning
- Commission & levies
  
- **Not contracting, casual labour or seasonal lets**

# Gross Margin

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Gross Output

-

Variable Costs

=

Gross Margin

# Fixed Costs

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Fixed Costs

=

Labour (L)

+

Power & Machinery (P&M)

+

Overheads (O)

# Fixed Costs – Labour

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- Labour
  - Regular Wages (inc PAYE etc)
  - Casual Labour
  - Self-employed Labour
  - Not self or partners

# Fixed Costs – P&M

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- Power & Machinery
  - Repairs & Spares
  - Vehicle Insurance & Road Tax
  - Contracting
  - Fuel, Electric, Oil, Gas & Coal
  - Depreciation
  - Leasing Charges (not HP)
  - Machinery Hire



# Fixed Costs – Overheads

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- Overheads (Property & General)
  - Accountancy Fees
  - Professional Fees
  - Subscriptions
  - Property Repairs
  - Farm Insurance, Liability Insurance etc
  - Telephone
  - Property Depreciation
  - Miscellaneous

# Gross Profit

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Gross Margin

-

Fixed Costs

=

Gross Profit

# Finance and Rent

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- Finance & Rent
  - Rent
  - Seasonal lets
  - Bank Interest
  - Loan Interest
  - HP Interest

# Net Profit (Loss)

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Gross Profit

-

Finance and Rent (F&R)

=

Net Profit / Loss

# P&L Exercise - Answers

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Year	2016	2015	2014
	£	£	£
Gross Output	227,332	231,205	207,150
Variable Costs	73,956	79,770	66,519
Gross Margin	153,376	151,435	140,631
Hired Labour	32,283	32,225	25,720
Power and Machinery	54,080	58,957	54,425
Overheads	15,313	14,244	13,047
Gross Profit	51,700	46,009	47,439
Finance and Rent	37,453	40,871	42,085
Net Profit	14,247	5,138	5,354

# Balance Sheet

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- A Statement of Affairs on one particular day in the year
- Details the Assets & Liabilities
- Details the Net Worth or Owner Equity
- Doesn't account for personal

# Balance Sheet

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- Common Limitations
  - Often out of date
  - Mainly for Inland Revenue Purposes
  - Layouts differ
  - Historic not market values
  - No physical details
  - Often Land and Entitlement are excluded

# Change in Net Worth

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Is the Business Growing ?

Net Worth

=

Assets

-

Liabilities

Effectively the proprietor's share if all the assets sold



# Balance Sheet Exercise

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- Looking at the tax accounts for A Farm:
  - What is the net worth of this business?
  - What is the owner equity of this business?



# Equity Ratio (% Owned)

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- Medium to long term view
- Best and most commonly quoted

$$\text{Owner Equity (\%)} = \frac{\text{Net Worth}}{\text{Total Assets}} \times 100$$

- “Safe” Levels
  - Owner Occupier > 70%
  - Tenant > 50%

# Owner Equity - Answer

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	<b>2016</b>
<b>Net Worth</b>	£125,089
<b>Owner Equity</b>	25%

# Cash Needs

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- Provision of a livelihood for farmer
- Maintenance of business assets and infrastructure in good working order
- Sufficient growth to enable survival in the long term

# Adequacy of Profit

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- Should cover
  - Private drawings
  - Tax
  - Loan repayments
  - Surplus for investment/growth

# Cash Needs Exercise

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- Is A Farm covering the cash needs of the business?



# Cash Needs – Answer

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# Factors affecting Cash Needs

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- Cash needs specific to each business
  - Number of partners (families)
  - Farm type (eg, arable, dairy)
  - Tenure (tenant, owner-occupier)
  - Size (ha, turnover)
  - System (eg, ploughing vs min-till)
  - Machinery policy



# Benchmarking Farm Businesses

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# Whole Farm Benchmarking

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- Gross Output Analysis
- Comparative Analysis

# Gross Output Analysis

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- Expressing a range of costs and margins as percentages of the business gross output
- Gives an indication of the output and cost structure of the business
- Will highlight the strengths and weaknesses of a business
- Best to use last three sets of farm tax accounts to show trends

# Gross Output Analysis (GOA)

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	<b>Target %</b>
Gross Output	100
Variable Costs	30-40
Gross Margin	60-70
Labour	15-18
Power & Machinery	15-18
Overheads	4-6
Gross Profit	>30
Finance & Rent	<15
Net Profit	>15

# GOA Exercise

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- Carry out a GOA on the summary of the P&L already prepared in the previous exercise.



# GOA - Answer

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Year	2016	2015	2014	Target
	%	%	%	%
Gross Output	100	100	100	100
Variable Costs	33	35	32	30-40
Gross Margin	67	65	68	60-70
Hired Labour	14	14	12	15-18
Power and Machinery	24	25	26	15-18
Overheads	7	6	6	4-6
Gross Profit	23	20	23	30 min
Finance and Rent	16	18	20	15 max
Net Profit	6	2	3	15 min

# Comparative Analysis

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- Own Farm - year on year
- Group Enterprise Costings
- QMS etc
- Farm Accounts Survey

# Comparative Analysis

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- Make sure you are comparing like with like
- Adjust figures to take account of rough grazing
- Figures are out of date
- Comparatives tend to be averages not targets



# Comparative Analysis Exercise

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- Carry out a comparative analysis on the summary of the P&L already prepared in the previous exercise.



# Comparative Analysis – Answer

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Year	2015			2014		
	£/ha			£/ha		
	A Farm	Ave.	High	A Farm	Ave.	High
Gross Output	736	960	1,362	660	952	1,387
Variable Costs	254	364	457	212	342	439
Gross Margin	482	596	905	448	610	948
Hired Labour	103	56	41	82	56	67
Power and Machinery	188	198	265	173	202	260
Overheads	45	94	120	42	87	100
Gross Profit	147	248	479	151	265	521
Finance and Rent	130	83	82	134	78	122
Net Profit	16	165	397	17	187	399

# Watch !!!!

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- Provides a “snapshot”
  - Look for trends (i.e. view over a few years)
  - Look for seasonal fluctuations (overdraft)
- Tax (not management) accounts
  - Costs aggregated
  - Adjustments for debtors, creditors, prepayments and accruals
  - Valuations (livestock, land)
- Historical
- Over emphasis of “per” figures

# Benchmarking enterprises

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- Exercise – Analyse the performance of two enterprises from the QMS Cattle and Sheep Enterprise Profitability 2014 year booklets
  - Upland suckler herds selling yearling calves P24
  - LFA upland ewe flocks P45
- Why are top third producers doing better than the average sample?
  - Comment on financial and physical results

# Upland Suckler Herds – Financial



<b>Figs are £ per cow</b>	<b>Bottom Third</b>	<b>Average</b>	<b>Top Third</b>
Herds in sample	8	25	8
<b><i>Calf Output</i></b>	<b>718</b>	<b>795</b>	<b>934</b>
Subsidies	43	46	51
<b><i>Gross output</i></b>	<b>761</b>	<b>841</b>	<b>985</b>
Replacement costs	90	87	87
Net Output	671	754	898
Total variable costs	380	356	332
<b><i>Gross margin</i></b>	<b>291</b>	<b>398</b>	<b>566</b>
Fixed costs	450	457	411
<b><i>Net margin</i></b>	<b>-159</b>	<b>-59</b>	<b>+155</b>
<b><i>Unpaid family labour @ £10/hr</i></b>	<b>147</b>	<b>131</b>	<b>203</b>

# Upland Suckler Herds - Technical



	Bottom Third	Average	Top Third
<i>Cows per bull</i>	27	26	33
Calves born (dead/alive) per 100 cows	93	94	96
Calves born dead per 100 cows	5	4	3
<i>Calves died before weaning per 100 cows</i>	4	3	2
Calves reared per 100 cows	84	87	91
<i>DLWG (KG)</i>	<i>0.94?</i>	<i>0.94?</i>	<i>0.94?</i>
<i>Weight – KG per calf sold</i>	360	384	398
<i>Weight produced per cow KG</i>	300	365	362
<i>Cow Replacement rate</i>	15	12	14
<i>Cow mortality %</i>	1.9	1.8	1.9
<i>Purchased Conc. KG per cow</i>	485	422	343
<i>Homegrown Conc. KG per cow</i>	65	139	263
<i>Stocking rate GLU/HA</i>	0.53	0.77	1.11

# £213/cow challenge

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- Why are top third £213/cow higher than average for net margin?
  - Output + £144/cow
    - 4 more calves/100 cows
      - Cow fertility, compact calving pattern
      - minimising difficult calvings and calf losses,
      - heifer management,
      - bull selection and management,
      - Nutrition and management of body condition
      - Herd health
    - Higher value of calves sold per cow in herd - £139 higher
      - More yearling calves,
      - Similar growth rates???
      - Heavier calf weights
    - Lower replacement rate/cost- No, but is normally lower
      - Cow longevity, fewer reasons for culling, longer lasting bulls

# £213/cow challenge

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- Variable Costs - £23/lower
  - Feed and forage costs - similar
    - Body condition, forage quality, rationing, grazing management
  - Vet & Med £11/cow less
    - Planned health approach?
    - Better herds sometimes have higher vet costs due to health scheme costs
  - Bedding £16/cow less
    - Less wastage? Reduced housing period?
    - Top third don't all have slats!
  
- Fixed costs - £46 lower, but need to factor in family labour.



# LFA Upland Ewes

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	Bottom third	Average	Top third
Output £/hd	87.76	97.97	114.37
Variable costs	44.01	40.58	40.31
Gross Margin	43.75	57.39	74.06
Fixed costs	53.26	49.35	53.17
Net Margin	-(9.51)	8.04	20.90
Lambs reared/ewe	1.45	1.49	1.56
Av value of lambs sold/hd	£66.71	£70.45	£73.51
Lambs sold finished/100 ewes	110	104	113
Lambs sold store/100 ewes	20	20	3

# LFA Upland Ewes



	Bottom third	Average	Top third
Lambs reared/ewe	1.45	1.49	1.56
Av lamb weight kg	40.57	40.82	41.72
Wt of lamb/ewe kg	58.83	60.82	65.08
Ewe efficiency (75kg ewe?)	78%	81%	87%
Variable cost/ewe £	£44.01	£40.58	£40.31
£/kg lamb VC	£0.74	£0.67	£0.62
Concentrate use kg/ewe	52	53	55
Concentrate £/ewe	12.06	12.47	13.00
Conc kg/lamb reared	35.86	35.57	35.25
Conc £/lamb reared	8.31	8.37	8.33

# £17/ewe challenge

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- Why are top third >£16.67/ewe higher than average?
  - Output + £16.40/ewe
    - 7 more lambs/100 ewes
      - Body condition, nutrition, health, lamb losses
    - Higher value lambs- £3.14 higher
      - More finished, higher lamb growth rates, market spec, performance recording, lambing date, creep
    - Lower replacement rate/cost- £1.54/ewe lower
      - Longevity, ewe mortality, cull value, replacement cost
  - Variable Costs - similar
  - Highlights the importance of Output

# How do we get closer to the top 1/3?

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- Work out where you are now and where you want to be – the gap
  - Subsidy gap/acceptable farm income gap for farmers
- Measure everything you do to:
  - Keep things consistent
    - Creep feed pre weaning for calves
  - Reduce risk of infection
    - Buy replacements from accredited health scheme herds
  - Pay attention to diet
    - Analyse forage and ration calculation for cattle
- See how small improvements in a number of areas can add up to a substantially more profitable enterprise – 1% here, 1% there

# What if marginal gains are not enough?

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- Already efficient
  - Cannot see where improvements can be made
- Some good years followed by bad years (outside your control)
- High fixed costs under current system
  
- Whole system change might be required
  - Look at others
  - Ask for advice
  - Join groups

# How do you benchmark?

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- How do you assess performance of your enterprises?
- What measurements do you use?
- Which data do you benchmark against?

# Cattle and sheep benchmarks

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- Sources of benchmarking information
  - QMS Cattle and Sheep Enterprise Profitability in Scotland booklets
  - Farm Management Handbook
    - targets and budgeting figures rather than benchmarks
  - Fertbench
    - SAC Consulting's Suckler Herd Fertility Benchmarking Program
  - SAHPS
    - Scottish Animal Health Planning Service (through vets)
  - BES (Beef Efficiency Scheme)

# Key benchmarks for beef cattle

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	<i>Target</i>
% Calvings <sup>1</sup>	95%
% Barren Cows	≤ 5%
% Cows calving in 1 <sup>st</sup> 3 weeks	65%
% Cows calving in 2 <sup>nd</sup> 3 weeks	25%
% Cows calving in 3 <sup>rd</sup> 3 weeks	7%
% Cows calving in 4 <sup>th</sup> 3 weeks	3%
Cow Bulling Period (weeks)	9
Heifer Bulling Period (weeks)	6
Calving period (weeks)	-
% Still births <sup>2</sup>	2%
% Calf deaths 0-48 hrs <sup>2</sup>	-
% Calf deaths 48 hrs-weaning <sup>3</sup>	-
% Calf mortality <sup>4</sup>	≤ 3%
% Calves reared <sup>5</sup>	94%
Average weaning age (days)	200 days
Average weaning weight (kg) <sup>6</sup>	265 kg
% Heifer Replacements	< 15%

<sup>1</sup> of cows/heifers bulled.

<sup>2</sup> of total calves born.

<sup>3</sup> of calves born alive.

<sup>4</sup> birth to weaning.

<sup>5</sup> of cows/heifers bulled.

<sup>6</sup> weights for bulls only.



# Key benchmarks for sheep

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	<i>Hill</i>	<i>Upland</i>	<i>Lowland</i>
% Scanning	135%	190%	195%
% Ewes barren	5%	2%	2%
% Ewes sold cull	13%	14%	14%
% Ewes & gimmers died	2%	2%	2%
% Lambs born alive	130%	165%	180%
% Lambs marked	123%	155%	170%
% Lambs weaned	121%	152%	167%
% Lamb mortality (birth-marking)	7%	10%	10%
% Lamb mortality (marking-weaning)	2%	3%	3%
% Lamb mortality (birth-weaning)	9%	13%	13%
% Lamb mortality (weaning-sale/tfer)	2%	2%	1%
Total number of lambs sold/retained	120%	150%	165%
Average weaning weight	35kg	38kg	40kg
% Lambs weaned by target date	50%	65%	95%
% Lambs meeting top market spec.	62%	70%	85%
% Lambs meeting average market spec.	33%	30%	15%
% Lambs outwith market spec.	5%	0%	0%
Average no. of lamb crops per ewe	4.5	5	5

# Key benchmarks for dairy

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# Business Planning – Getting to the point

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# What are Objectives?

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- Precise descriptions of what is expected to be achieved
  - Focus on improvement
- Stated in terms of outcomes and results
  - Specific
  - Measurable
  - Achievable
  - Relevant
  - Timed
- Established early on in the planning phase
  - Milestones

# Benefits of Objectives

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- Purpose & direction
- Focus on important things
- People work better if they have a goal
- Helps recognise problems that will affect objective being met
- People need success criteria to measure performance against
- Performance can be appraised
- Discussion of objectives increases buying in and taking ownership
- Better communication of business goals

# Specific Objectives

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- An observable action, behaviour or achievement described which is linked to a rate, number, percentage or frequency
  - to generate net profit that exceeds drawings
    - *to generate net profit of £10,000 in excess of personal drawings by end of financial year 2017*
  - to improve lambing percentage
    - *to achieve lambing percentage of 165% by next lambing*

# Measurable Objectives

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- A procedure has to be put in place which allows tracking/recording of the action upon which the objective is focused.
- Need to have a reliable system in place to measure progress towards achievement of the objective.

# Achievable Objectives

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- Objective must have a likelihood of success (need to be stretching/demanding?)
- It is important that the objective is **AGREED** by all concerned and the risks are understood!



# Relevant Objectives

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- The objective (target) must be something you can have an impact on/change, and must be relevant to the business.
  - Are all the necessary knowledge, skills & authority in place to reach the objective?

# Timed Objectives

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- A finite time and resources need to be agreed.
- If no deadline set, will find something else to do that has a higher priority.
- Need to have finish and/or start dates clearly stated.

# Business Planning – What are your options?

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# Budgeting Principles

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- Partial Budget: Options Appraisal
  - Examine the impact of relatively minor/straightforward changes
- Established Year Budget: Gross Margin Based
  - Estimate the future financial performance of a system and check out 'what if' scenarios
- Annual Budget: Cashflow Based
  - Detailed projection of future profit, cash and capital situation

# Assumptions

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- Imperative if you or anyone else is going to follow your budget
- Quantities and where they were derived from
- Prices with justifications

# Sensitivity

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- With any budgeting tool, a sensitivity analysis can be carried out to see the effect of price changes to the partial budget and where the breakeven point is.
  - Price of output
  - Price of input
  - Technical performance
    - Yield
    - Production percentages

# Partial Budget: Options Appraisal

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- A rough, quick form of analysis to assess viability
- Useful only when a partial change in the existing plan is being considered
- Looks at the impact of the change on the business
  - Expanding an enterprise
  - Alternative enterprises
  - Different production practices
- Looks at only the costs and receipts that will be affected by the policy change
- Subjective assessment of depreciation
- Difficult to compare alternative investments
- Does not take into account variable cashflows
- May ignore repayment conditions

# Partial Budget: Options Appraisal

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The proposed change will have four possible impacts on the business:

1. Cause additional returns to be received.
  2. Eliminate or reduce some costs.
  3. Eliminate or reduce some returns.
  4. Cause additional costs to be incurred.
- Costs impacted by the change could include:
- Variable costs
  - Labour
  - Power and Machinery
  - Overheads
  - Depreciation
  - Interest



# Partial Budget: Options Appraisal

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The Net effect will be:

sum of the positive economic effects  
(additional income + costs saved)

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sum of the negative economic effects  
(revenue forgone + additional costs)

<b>Positive Effects</b>	<b>Negative Effects</b>
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Extra Revenue		Revenue Forgone	
	£		£
	£		£
	£		£
	£		£
	£		£

Costs Saved		Extra Costs	
	£		£
	£		£
	£		£
	£		£
	£		£

Total Gains		Total Losses	
	£		£

Extra Benefit	£	Extra Loss	£
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# Finishing Lambs vs Store Lambs



Positive Effects		Negative Effects	
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Extra Revenue		Revenue Forgone	
98 lambs @ £52/hd	£ 5,096	100 lambs @ £41/hd	£ 4,100
	£ 0		£ 0
<b>Total Extra Revenue</b>	<b>£ 5,096</b>	<b>Total Revenue Forgone</b>	<b>£ 4,100</b>

Costs Saved		Extra Costs	
	£ 0	Feed 6t @ £200/t	£ 1,200
	£ 0	Vet @ £1.20/hd	£ 120
	£ 0	Bedding 5t @ £85/t	£ 425
	£ 0	Labour 0.5hr/hd @ £10/hr	£ 500
<b>Total Costs Saved</b>	<b>£ 0</b>	<b>Total Extra Costs</b>	<b>£ 2,245</b>

<b>Total Gains (positives)</b>	<b>£ 5,096</b>	<b>Total Losses (negatives)</b>	<b>£ 6,345</b>
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<b>Extra Benefit</b>	<b>£ 0</b>	<b>Extra Loss</b>	<b>£ 1,249</b>
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# Selling Suckled Calves vs Yearling Calves



Positive Effects		Negative Effects	
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Extra Revenue		Revenue Forgone	
50 suckled calves @ £630/hd	£ 31,500	49 yearlings @ £870/hd	£ 42,630
<b>Total Extra Revenue</b>	<b>£ 31,500</b>	<b>Total Revenue Forgone</b>	<b>£ 42,630</b>

Costs Saved		Extra Costs	
Feed 15t @ £200/t	£ 3,000		£ 0
Silage 175t @ £23/t	£ 4,025		£ 0
Bedding 25t @ £85/t	£ 2,125		£ 0
Labour 4hr/hd @ £10/hr	£ 2,000		£ 0
<b>Total Costs Saved</b>	<b>£ 11,150</b>	<b>Total Extra Costs</b>	<b>£ 0</b>

<b>Total Gains (positives)</b>	<b>£ 42,650</b>	<b>Total Losses (negatives)</b>	<b>£ 42,630</b>
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<b>Extra Benefit</b>	<b>£ 20</b>	<b>Extra Loss</b>	<b>£ 0</b>
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# Partial Budget: Options Appraisal

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- Handling Capital Investment
  - Including costs associated with capital investment
    1. Depreciation plus interest on average capital
    2. Amortized loan value

# Partial Budget: Options Appraisal

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Shed costing £100k with 20 year life expectancy

- Depreciation + interest
  - Depreciation = £5,000 pa
  - Interest calculated on average capital = £50k @ 7% = £3,500
  - Total = £8,500 pa
- Amortization
  - annual charge per £1,000 for 7% over 20 years = £94
  - £94 x 100
  - Total = £9,400 pa

# Partial Budgeting: Options Appraisal

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Machine costing £60,000 traded in 10 years later for £10,000

- Depreciation + interest
  - Depreciation = £5,000 pa
  - Interest on av. capital =  $(60+10)/2 = 35 \times 5\% = £1,750$  pa
  - Total = £6,750 pa
- Amortisation
  - 60k @ 5% for 10 yrs = £130
  - £130 x 60
  - Total = £7,800 pa

# Building a shed vs Outwintering 100 cows



Positive Effects		Negative Effects	
Extra Revenue		Revenue Forgone	
FYM 800t @ £9.62/t	£ 7,696		£ 0
<b>Total Extra Revenue</b>	<b>£ 7,696</b>	<b>Total Revenue Forgone</b>	<b>£ 0</b>
Costs Saved		Extra Costs	
Labour and machinery 288 hours @ £25/hr	£ 7,200	Loan repayment on £120k @ 5% interest over 20 years	£ 9,600
	£ 0	Bedding 125t @ £85/t	£ 10,625
<b>Total Costs Saved</b>	<b>£ 7,200</b>	<b>Total Extra Costs</b>	<b>£ 20,225</b>
<b>Total Gains (positives)</b>	<b>£ 14,896</b>	<b>Total Losses (negatives)</b>	<b>£ 20,225</b>
<b>Extra Benefit</b>	<b>£ 0</b>	<b>Extra Loss</b>	<b>£ 5,329</b>



# Established Year Budget: Gross Margin Based

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- Pros
  - Excellent for comparing different systems
  - Good for deriving assumptions
  - Consistent approach / terminology
- Cons
  - How to estimate Bank Interest?
  - Cashflow effects?
  - Annual accounts effects?
  - Balance Sheet effects?

# Established Year Budget: Gross Margin Based



- Enterprise Gross Margins

WHEAT-WINTER			OILSEED RAPE-WINTER		
<b>GROSS MARGIN DATA</b>			<b>GROSS MARGIN DATA</b>		
Grain yield: t/ha (t/acre)	8.0	(3.2)	Grain yield: t/ha (t/acre)	4.0	(1.6)
Straw yield: t/ha (t/acre)	5.2	(2.1)			
<b>OUTPUT</b>	<b>£/ha (acre)</b>		<b>OUTPUT</b>	<b>£/ha (acre)</b>	
Grain @ £125/t*	1,000		Grain @ £250/t	1,000	
Straw @ £25/t	130			1,000	(405)
	<u>1,130</u>	(457)		<u>1,000</u>	
<b>VARIABLE COSTS</b>			<b>VARIABLE COSTS</b>		
Seed @ £345/t	79		Seed @ £10/kg	45	
Fertiliser	210		Fertiliser	170	
Casual labour	-		Casual labour	-	
Contract	-		Contract	28	
Sprays	118		Sprays	91	
Other expenses	13		Other expenses	-	
	<u>420</u>	(170)		<u>334</u>	(135)
<b>GROSS MARGIN</b>	<u>710</u>	(287)	<b>GROSS MARGIN</b>	<u>666</u>	(270)

# Established Year Budget: Gross Margin Based



## CROSSBRED BREEDING EWES-FINISHED AND STORE LAMB PRODUCTION ON GRASS GROSS MARGIN DATA

OUTPUT				Upland £/100 ewes
Finished lambs:	98	@	£54 (42 k	5,292
	138	@	£54	-
Store lambs:	50	@	£46	2,300
	20	@	£46	-
Draft/cast ewes:	23	@	£39	897
Wool sales 272kg @ £0.40/kg				109
				<u>8,598</u>
Less:	27	gimmers purchased @ £90		2,430
		ram replacement (net)		320
				<u>5,848</u>
<b>VARIABLE COSTS</b>				
Barley, protein & minerals @ £150/t				750
Vet, medicines & dips				543
Bedding straw @ £65/t				218
Commission, levies, haulage, shearing, scanning & tags				814
				<u>2,325</u>
<b>Gross margin before forage</b>				<u>3,523</u>

## OVERWINTERING SPRING-BORN SUCKLED CALVES GROSS MARGIN DATA

OUTPUT				Steer £/head
Sale value (1% mortality):				
	390	kg @	170 p	656
	350	kg @	165 p	-
Less: Weaned calf:				
	280	kg @	170 p	476
	240	kg @	165 p	-
				<u>180</u>
<b>VARIABLE COSTS</b>				
Barley, protein & minerals @ £140/t				42
Barley, protein & minerals @ £140/t				-
Feeding straw @ £40/t (home-grown)				-
Bedding straw @ £40/t (home-grown)				20
Vet & medicines				21
Commission, levies & haulage				36
				<u>119</u>
<b>Gross Margin before forage</b>				<u>61</u>

# Established Year Budget: Gross Margin Based

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## GRASSLAND-GRAZING

### VARIABLE COST DATA

Intensity-		
Fertiliser kg N/yr	125	(100)
cow grazing days	380	
(per ha)		

VARIABLE COSTS	£/ha (acre)	
Seeds*	16	
(annual charge)		
Fertiliser	110	
Casual labour	-	
Contract work	-	
Sprays etc.	16	
(annual charge)		
Other expenses	-	
	<u>142</u>	(57)

## GRASSLAND-SILAGE AND AFTERMATH GRAZING

### VARIABLE COST DATA

Fertiliser kg N/ha		
(units/acre)/annum	220	(176)
Silage cuts	Two	

VARIABLE COSTS	£/ha (acre)	
Seeds (annual charge)*	16	
Fertiliser	252	
Casual labour	-	
Contract work	-	
Sprays etc.	16	
(annual charge)		
Other expenses	-	
	<u>284</u>	(115)

# Established Year Budget: Gross Margin Based

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- Miscellaneous Income
  - Support payments
  - Contracting, Wayleaves, Forestry Income
  - Rental Income, Sporting Receipts etc.
  
- Estimate Fixed Costs
  - Labour
  - Machinery
  - Property (incl. Rents)
  - Miscellaneous
  - Interest & Finance Charges

# Established Year Budget: Gross Margin Based

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Enterprise Gross Margins

+

Misc Income

=

Farm Gross Margin

-

Fixed Costs (excl. Rent & Interest)

=

Gross Profit

-

Rent & Interest

=

Net Profit

# Mixed Farm Gross Margin Budget

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	No.		£		£
Suckler cows selling spring born suckled calves	150	x	291.00	=	43,650
Crossbred ewes selling finished lambs	700	x	41.20	=	28,840
BPS				=	40,000
LFASS				=	10,000
Sundry				=	2,000
Total Gross Margin				=	124,490
Fixed Costs					
Labour				=	20,000
Power and Machinery				=	50,000
Overheads				=	35,000
Total Fixed Costs				=	105,000
Gross Profit				=	29,490
Rent and Interest				=	15,000
Net Profit				=	14,490





# Annual Budget: Cashflow Based

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- Cashflow is a control document
  - Profit
  - Cash
  - Capital
  
  - Bank interest paid
  - Peak borrowing requirement
- Assumptions required
  - Timing of orders, deliveries, applications, payments, sales and receipts
  - Livestock reconciliation
  - Crop production reconciliation
- Review/monitor
  - Budget vs actual

# Annual Budget: Cashflow Based



## CROP PRODUCTION AND DISPOSAL RECORD

FOR :- Oddjob Farm : Year to 28 November 2010

CROP	AREA (Acres)	YIELD (T/Ac.)	TOTAL YIELD (Tonnes)	OPENING STOCK (Tonnes)	TOTAL AVAILABLE (Tonnes)	FEED USED (Tonnes)	SEED USED (Tonnes)	WASTE (Tonnes)	SOLD (Tonnes)	CLOSING STOCK (Tonnes)
Spring Barley	57	2.0	114.0	0	114.0				114	0
Winter Barley	42	2.9	119.7	75	194.7	32		2	110	50
Winter Wheat	40	3.3	130.0	125	255.0				125	130
Set-Aside	12	0.0	0.0	0	0.0					0
Turnips	5	28.0	140.0	0	140.0	140				0
Silage	35	18.0	630.0	550	1180.0	630				550
			0.0		0.0					0
			0.0		0.0					0
			0.0		0.0					0
			0.0		0.0					0
			0.0		0.0					0

# Annual Budget: Cashflow Based



## LIVESTOCK RECONCILIATION RECORD

FOR :- Oddjob Farm : Year to 28 November 2010

	No. at Start	No. Born	No. Bought	No. Xfer in	TOTAL	No. Died	No. Sold	No. Xfer out	No. at End	Remarks
<b>COWS</b>	44			6	50	1	5		44	
<b>HEIFERS</b>	6		6		12			6	6	
<b>Y. STEERS</b>	23			21	44		23		21	
<b>Y. HEIFERS</b>	23			21	44		23		21	
<b>CALVES</b>	26	42			68	2		42	24	
<b>BULLS</b>	0				0				0	
	0				0				0	
	0				0				0	
				48				48		

CASH OUTFLOW	YEAR ENDING														
	30-Nov-13													TOTAL	
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov			
	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget		
<b>TRADING</b>															
<b>Stock Purchases</b>															
Bulls	-		4000											4000	
	-														
	-														
Tups	-										4200			4200	
	-														
	-														
<b>Variable Costs</b>															
Fertiliser	-	5800				1318		9013			12559			28690	
Seeds	-					4446			1750					6196	
Other Crop	-		Sprays				2031	3660						5691	
	-		Miscellaneous							2970				2970	
	-														
Feeds	-	Cattle Concentrates	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	12000	
	-	Sheep Concentrates					1500	1500						3000	
Livestock costs	-	Vet & Medicine	600	650	350	350	350	350	2000	350	350	350	950	7000	
	-	Sundry Livestock	905	905	905	905	905	905	905	905	905	905	905	10865	
	-														
	-														
	-														
<b>Fixed Costs</b>															
Labour	-	Regular Labour	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	23400	
	-	Part-time Labour	750	750	750	750	750	750	750	750	750	750	750	9000	
Machinery & Power	-	Crop Contract	5597					9200			2000			16797	
	-	Grass Contract	11680											11680	
	-	Trac./Mot. Upkeep	560	1000	1000	1000	1000	3000	2000	2000	1000	3000	1000	18560	
	-	Heat & Light	1300		925			925		925			925	5000	
	-	Repairs & Renewals	450			500	500	500	500	500	500	500	500	4950	
	-	Haulage			300	300	700	700	700					2700	
	-														
	-														
Property	-	Rent	9433					9432						18865	
	-	Sesonal Grazing							5702					5702	
	-	Rates	149	149			149	149	149	149	149	149	149	1485	
General	-	Repairs		2000			2000				1684			5684	
	-	Professional Fees	6450	4794										11244	
	-	Insurance				800								800	
	-	Telephone & Postage	142	142	142	142	142	142	142	142	142	142	142	1698	
	-	Miscellaneous	158	158	158	158	158	158	158	158	158	158	158	1892	
Interest	-	Overdraft	608	439	504	541	532	472	480	566	638	646	644	6768	
	-	Loan Interest	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	24000	
	-	HP Interest	10	7	5									22	
<b>CAPITAL</b>															
Machinery	-	Machinery													
Land (& Buildings)	-		445900											445900	
Farm Structures	-														
Loan repayment	-	Long Term	680	680	680	680	680	680	680	680	680	680	680	8160	
	-	Short Term	1648	1651	1423	1368	1368	1368	1368	1368	1368	1368	1368	17034	
Capital Withdrawn	-														
<b>PERSONAL</b>															
	-	Drawings	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	1250	15000	
	-	Income Tax													
	-	Insurance													
<b>VAT PAYMENTS</b>															
<b>TOTAL OUTFLOW</b>			493219	25324	17341	13693	15433	23562	38195	26440	22216	19502	31604	14422	740953

CASH INFLOW		Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	TOTAL
		Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	Budget	
<b>TRADING</b>														
Crops	- Barley									12250	8750	5250	5250	31500
	- Straw													
	-													
	-													
	-													
Livestock	- Cast Cows/Bulls	6637	5682											12320
	- Finished Steers				9932	12415	12415	12415	4966					52143
	- Finished Heifers			6303	6303	5253	6303							24162
	- SBCS					4398								4398
	-													
	-													
	- Cast Ewes/Tups		201								3896	3896		7993
	- Finished Lambs									7426	6876	6876		21178
	- Store Lambs	7987												7987
	- Wool										656			656
	-													
	-													
	-													
	-													
Other Income	- SFP	85036												85036
	- LFASS					11308								11308
	- Grants	7006												7006
	- Sundry	900					2400							3300
<b>CAPITAL</b>														
Machinery	- Machinery													
Land & Buildings	-													
New Loans	- Long Term	436450												436450
	Short Term													
Other	-													
<b>PERSONAL</b>														
	-													
	-													
	-													
<b>VAT REFUNDS</b>														
<b>TOTAL INFLOW</b>		544016	5883	6303	16235	33374	21118	12415	4966	19676	20178	16022	5250	705437
<b>NET CASHFLOW</b>		50797	-19441	-11038	2542	17940	-2444	-25780	-21474	-2540	677	-15582	-9172	-35516
														-35516
<b>OPENING BALANCE</b>		-182500	-131703	-151144	-162183	-159641	-141701	-144145	-169925	-191399	-193939	-193262	-208844	
<b>CLOSING BALANCE</b>		-131703	-151144	-162183	-159641	-141701	-144145	-169925	-191399	-193939	-193262	-208844	-218016	

# Is the financial benefit worth the effort?

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- Financial impacts:
  - Bank lending restrictions
  - Interest rate changes
  - Taxation
  - Balance sheet
  
- Non financial impacts:
  - Weather
  - Disease
  - Market
  - Workload
  - Family
  - Timescale

# Business Planning – Taking action

Kara Craig

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*Leading the way in Agriculture and Rural Research, Education and Consulting*

# Action plans

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- A good way to identify and plan the actions you want to take
- Committing to paper makes it more likely that you will carry them through
- Main points
  - Identify issue
  - What do you aim to do
  - How are you going to do it
  - Who is involved
  - When are you going to do it
  - Progress/Monitor



# Summary

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- Planning is an essential part of any business.
- Important to assess both the financial and non financial aspects of an existing and new business.
- Options for budgeting depending on situation, e.g. enterprise changes or major investment.

# Take home messages

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