Argyll Farm and Croft Key Performance Indicators (KPI) Tool Guide

Aim of the KPI Tool

Key performance indicators are a useful way to identify the strengths and weaknesses of your business.

This tool is designed to make use of existing on-farm/croft information that should be easy to find. It's a good starting point for analysing your business and will allow you to focus on the aspects of your business that need improvement.

The KPI targets are linked to Argyll hill farming and crofting models and targets will be different for upland or lowground farming systems.

The tool can be found here: https://www.fas.scot/downloads/kpi-tool-template/

How to Use the KPI Tool

This tool is presented in a excel spreadsheet format. There are 6 tabs. The first tab is a set of instructions. Thereafter the KPI's are divided into 5 key business areas:

- Business
- Suckler Cows
- Hill ewes
- Grassland
- Environment

Each business area has a number of KPI;'s so you can judge yourself against these by entering in some of you own business data.

You do not need to complete all tabs. Just enter data into the enterprise or subject that interests you most.

You only need to enter data into the white boxes (cells). If you hover over the corner of a cell where there is a red arrow, more detailed information and guidance appears.

Where your business does not hit a target level, the difference will be highlighted in red.

The pages overleaf show some hints and tips and some examples of completed KPI's.

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Hints and Tips

Financial KPI's

Ideally use your tax accounts to find the data for gross output analysis. If you do not have full tax accounts, your cashbook or other financial records should still allow you to estimate all of these costs.

The 3 year trend is useful as it irons out any single year discrepancies.

Use the pop out comments to help you allocate costs from your tax accounts to the summary headings used within this tool.

Sheep and Cow Gross Margins:

Some variable costs in your accounts/cashbook may not be split between your cattle and sheep enterprises. You just have to make your own judgement of how much each enterprise uses.

For example if all the silage is fed to the cattle enterprise, then you allocate fertiliser and wrap costs associated with silage making to the cow enterprise only.

You can also allocate some costs based on livestock units. Assume that 1 cow = 7 ewes.

If your records do not split up enterprise costs in enough detail, that is a heads up that record keeping may need improved. You should aspire to be able to make business decisions using data from enterprise level, rather than whole farm / croft level.

Suckler Cow and Hill Ewe Physical KPIs

Use fank notebook, mart receipts and herd and flock records to find this information.

If you have a set of weigh bars on your crush or a sheep weight crate, then even weighing a small number of animals will give you an idea of the average weights of a group.

Grassland KPI's

This information will only be available to you if you have analysed your soils and silages.

Environmental KPIs

This information will only be available to you if you have completed a carbon audit.

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The European Agricultural Fund
for Rural Development:
Europe investing in rural areas

SAC
CONSULTING

Scottish Government
Riaghaltas na h-Alba
gov.scot

Here are some completed examples from each section

Financial KPI's Example and Results

Financial

Gross output Analysis Data Entry - comparing costs as a % of output

	Year 1	Year 2	Year 3
Enter the gross output of your business	£10,000	£12,000	£11,000
Enter total variable costs	£2,000	£5,000	£3,000
Enter total labour costs	£500	£3,000	£1,000
Enter total machinery costs	£4,000	£5,000	£3,000
Enter total overheads	£500	£500	£500
Enter total finance costs	£250	£250	£250

Gross Output Analysis KPI's

	Year 1	Year 2	Year 3	Target	Difference
Variable Costs	20%	42%	27%	30%	0%
Gross Margin	**80%**	**58%**	**73%**	**70%**	0%
Labour Costs	5%	25%	9%	10%	3%
Machinery and Power	40%	42%	27%	20%	16%
Overheads	5%	4%	5%	15%	-10%
Finance Charges	3%	2%	2%	10%	-8%
Net Profit	**28%**	**-15%**	**30%**	**15%**	-1%

Gross Output Analysis Results
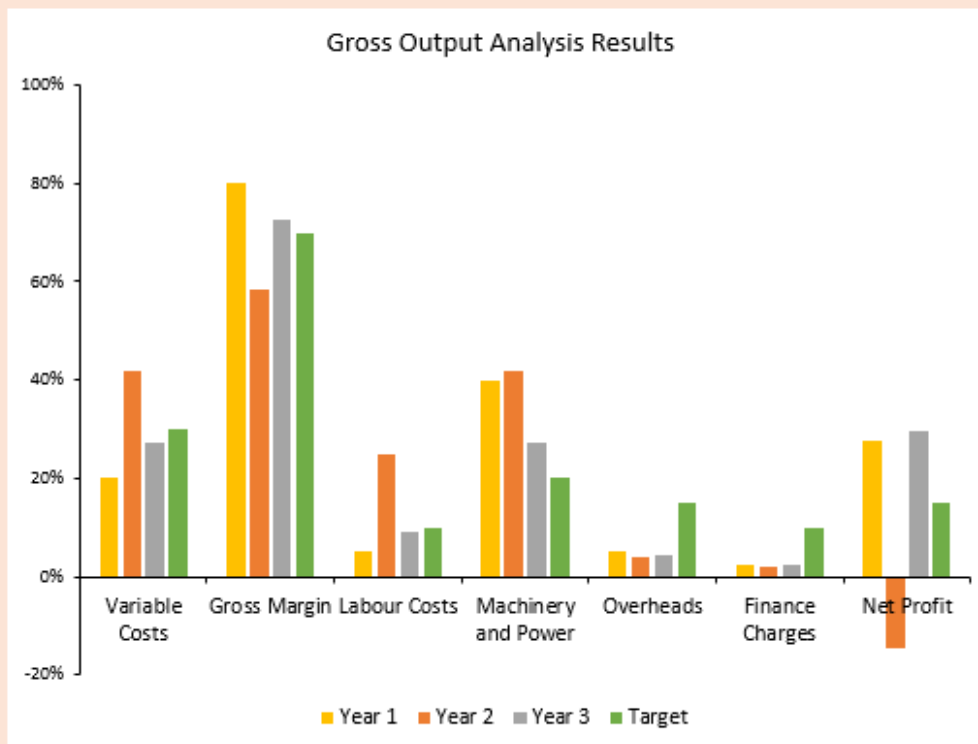
Suckler Cow Gross Margin Example

Suckler Cow Gross Margin	Year 1	Year 2	Year 3
Total number of cows put to the bull	35		
Total sales of calves and cull cows (£)	15,000		
Suckler Beef Support Scheme (£)	3500		
Replacement Costs (£)			
Bulls	1000		
Replacement hfs/retained hfs	2500		
Variable Costs (£)			
Feed	5,250		
Vet Med	1750		
Straw	0		
Forage and fertiliser cost	2500		
Sundries	1000		
Total variable costs (£)	10,500		

Suckler Cow Margin KPI's Result

Suckler Cow Gross Margin Results	Year 1	Year 2	Year 3	Target	Difference
Sales Output (£/cow)	£429			£450	-£21
SBSS Output (£/cow)	£100			£115	-£15
Replacement cost (£/cow)	-£100			-£80	-£20
Total Output (£/cow)	£429			£485	-£56
Variable costs (£/cow)					
Feed	£150			£200	-£50
Vet Med	£50			£40	£10
Straw	£0			£0	£0
Forage and fertiliser cost	£71			£50	£21
Sundries	£29			£20	£9
Total variable cost (£/cow)	£300			£310	-£10
Gross Margin £/cow	£129			£175	-£46
Gross Margin without support £/cow	£29			£60	-£31

Hill Ewe Example

Hill Ewe Gross Margin	Year 1	Year 2	Year 3
Total number of ewes & gimmers put to the tup	100		
Total sales of lambs and cull ewes (£)	3200		
SSUSS scheme (£)	1700		
Replacement Costs (£)			
Tups	250		
Replacement hoggs/retained hoggs	900		
Variable Costs (£)			
Feed	850		
Vet Med	500		
Forage and fertiliser cost	200		
Sundries	200		
Total variable costs (£)	1750		

Hill Ewe KPI's Result

Hill Ewe Gross Margin Results	Year 1	Year 2	Year 3	Target	Difference
Sales Output (£/ewe)	£32.00			£30	£2.00
SSUSS Output (£/ewe)	£17.00			£18	-£1.00
Replacement costs (£/ewe)	-£11.50			-£9	-£2.50
Total Output (£/ewe)	£37.50			£39	-£1.50
Variable costs (£/ewe)					
Feed	£8.50			£7	£1.50
Vet Med	£5.00			£6	-£1.00
Forage and fertiliser cost	£2.00			£1	£1.00
Sundries	£2.00			£3	-£1.00
Total variable cost (£/ewe)	£17.50			£17	£0.50
Gross Margin (£/ewe)	£20.00			£22	-£2.00
Gross Margin without support (£/ewe	£3.00			£4	-£1.00

Suckler Cow Example

Suckler Cows

Suckler Cows KPI Data Entry

	Year 1	Year 2	Year 3
Number of 8th calvers + put to the bull	10		
Number of 5th - 7th calvers put to the bull	10		
Number of 2nd - 4th calvers put to the bull	10		
Number of heifers put to the bull	5		
Total number of cows	35		
Average weight of cow (8th + calvers)	600		
Average weight of cow (5th -7th calvers)	550		
Average weight of cow (2nd - 4th calvers)	550		
Average weight of heifers	500		
Number of full time staff	0.5		
Number of bulls used	1		
Date 1st calf born (DD/MM/YYYY)	01/02/2020		
Date last calf born (DD/MM/YYYY)	08/08/2020		
Number of calves born alive	30		
Number of calves died	3		
Number of calves sold	24		
Number of calves retained	3		
Average birth weight	40		
Average age at selling (days)	180		
Total weight sold/retained (8th + calvers)	1400		
Total weight sold/retained (5th - 7th calvers)	1800		
Total weight sold/retained (2nd - 4th calvers)	1800		
Total weight sold/retained (heifer calvers)	900		
Average weight of calf at selling (kg)	219		

Suckler Cow KPI Results

	Year 1	Year 2	Year 3	Target	Difference
Cow to bull ratio	35			40	-5
Labour efficiency (FTE per 100 cows)	0.7			1	-0.3
Calves weaned (%)	77%			92%	-15%
Calving period (weeks)	-4			15	-19
Average DLWG of all calves (kg/day)	-0.66			0.8	-1.46
Cow efficiency for 8th + calvers (%)	23%			40%	-17%
Cow efficiency for 5th - 7th calvers (%)	33%			40%	-7%
Cow efficiency for 2nd - 4th calvers (%)	33%			40%	-7%
Cow efficiency for heifer calvers (%)	36%			40%	-4%

Hill Ewe Example

Hill Ewes

Hill Ewe Data Entry

	Hill 1/Year 1	Hill 2/Year 2	Hill 3/Year 3
Number of ewes put to tup	80		
Number of gimmers put to tup	20		
Total number of sheep to tup	100	0	0
Number of full time staff	0.25		
Number of tups used	5		
Scanning numbers (optional data)			
Number of singles scanned	90		
Number of twins scanned	10		
Number of triplets scanned	0		
Total no of lambs at scanning	110	0	0
Number of lambs at marking	95		
Number of lambs sold	60		
Number of lambs retained (eg hoggs)	25		
Total number of ewe deaths	15		

Hill Ewe KPI Results

Hill Ewe KPI's

	Hill 1/Year 1	Hill 2/Year 2	Hill 3/Year 3	Target	Difference
Ewe to tup ratio	20			35	-15
Labour efficiency (no of ewes per FTE)	400			1000	-600
Scanning %	110%			95%	15%
% loss at marking	15.8%			10%	5.8%
% loss at selling	10.5%			10%	0.5%
Ewe mortality (%)	15.00%			10%	5.0%
Lambing % to sale	85%			75%	10%

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Soil Example and Result

Grassland

Soil pH Data Entry and Result
For soil type, please use the drop down arrows to right of cell

	Soil Type	pH	Target	Difference
Field 1	Peaty	4.9	5.2	-0.3
Field 2	Peaty	5.1	5.2	-0.1
Field 3	Humose	5.8	5.6	0.2
Field 4	Other mineral soils	5.8	5.9	-0.1
Field 5			0	0
Field 6			0	0
Field 7			0	0
Field 8			0	0
Field 9			0	0
Field 10			0	0

Silage Quality Example and Result

Silage Quality Data Entry and Results

Silage Quality	Bale stack 1 / Pit 1	Bale stack 2 / Pit 2	Bale stack 3 / Pit 3	Bale stack 4 / Pit 4	Target	Difference
Dry Matter (%)	25%				30%	-5%
D Value (%)	65.0%				70%	-5.0%
ME (MJ/kg DM)	10.5				10	0.5
Crude Protein (%)	14.0%				12%	2.0%
pH	4.6				4.4	0.20

Environment Example and Result

Environmental KPI Data Entry & Results

	Year 1	Year 2	Year 3	Target	Difference
Carbon footprint					
Beef (kg CO$_2$e/ kg dwt)	45			50	-5
Sheep (kg CO$_2$e/ kg dwt)	70			45	25
Whole Farm Per hectare (kgCO2e/ha)	1200			1000	200

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