THE UNIVERSITY OF MELBOURNE

Melbourne Veterinary School

AEPS Week 2
Productivity and profitability

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VETS30030 / VETS90123

2.1 Profitability and productivity

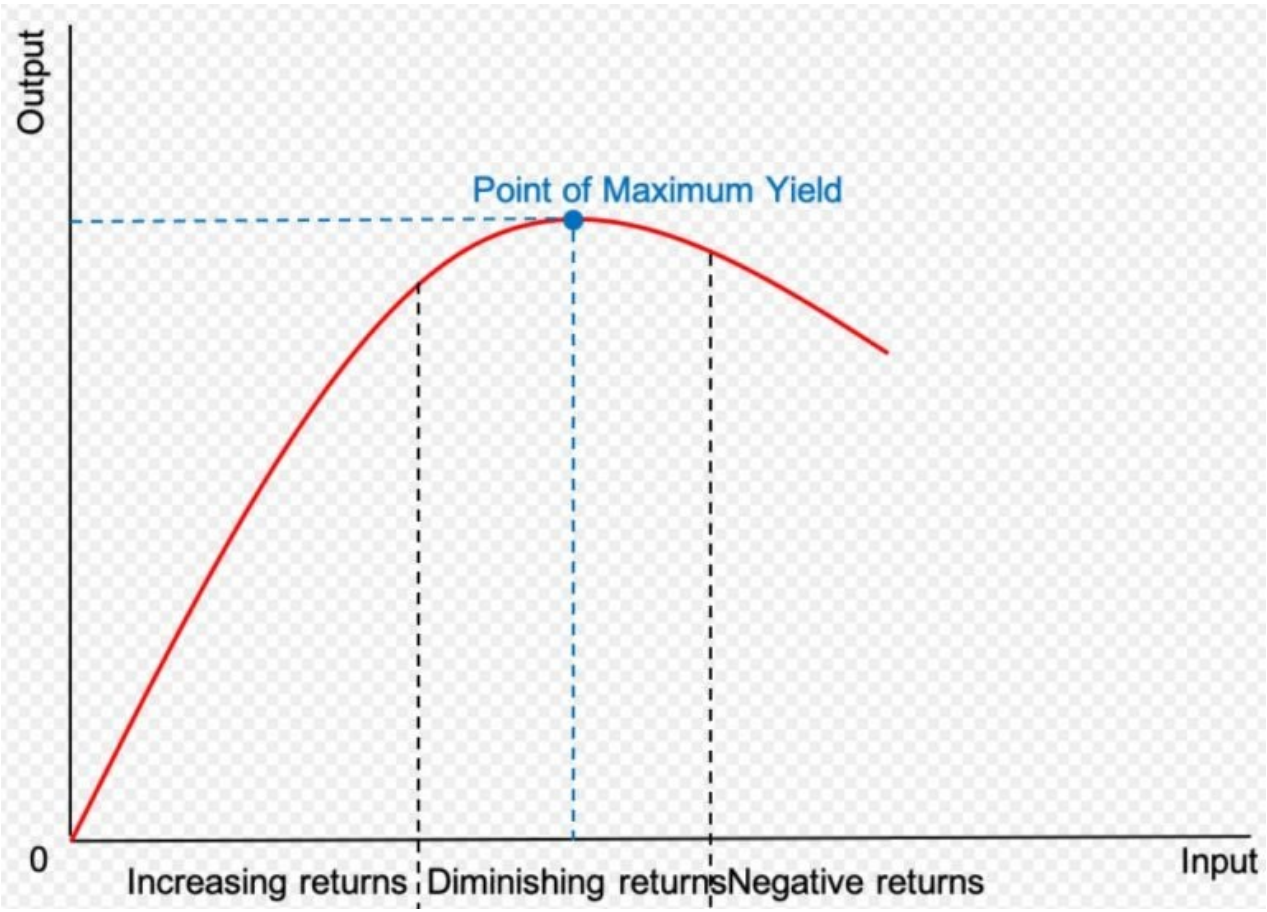
- Overview of how profitability and productivity are measured and why this is important
- Size of livestock industry and relative importance of export to different markets

Measuring profitability and productivity

- A property can be highly productive but not profitable at all
- Productivity can be measured in a range of way but generally and output per animal or per area e.g. kg of LWT or kg bodyweight per hectare
- Profit is the amount of money left after all other business expenses are paid and income accounted over a given period
- https://www.publish.csiro.au/ebook/chapter/9780643095168_CH11 (further information here)
- Profit may be shown by “return on assets” or “return on investment” or similar title

Profit v production

- Profit is a better representation of how a business is performing
  - Productivity (kg lamb produced per hectare) but if this is achieved with huge supplementary feed costs then profit may be zero or negative
- If you continue applying inputs to a system even each addition of input will result in less output
- Slope of line is important on graph
- Good example of this = fertiliser use



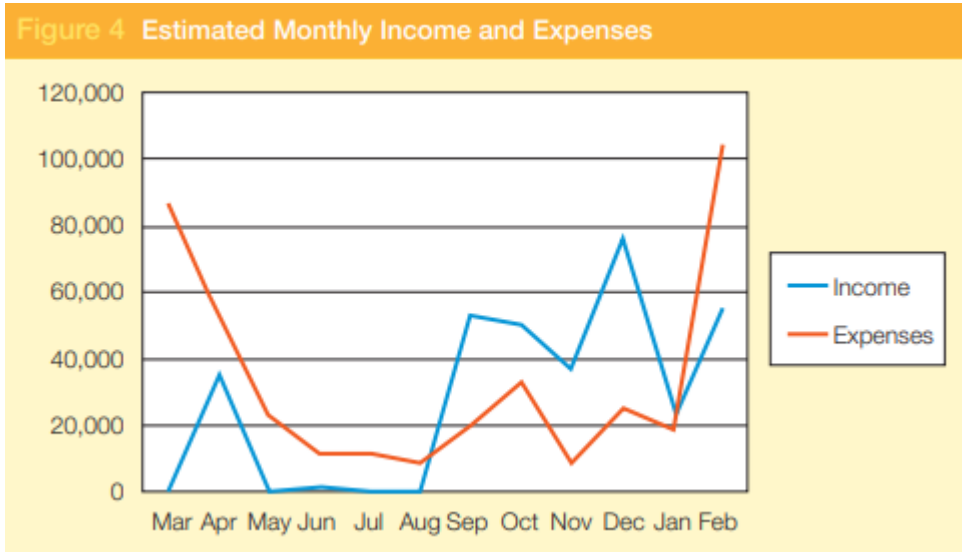
From https://marketing-dictionary.org/wp-content/uploads/2021/06/law-of-diminishing-768x549.jpg

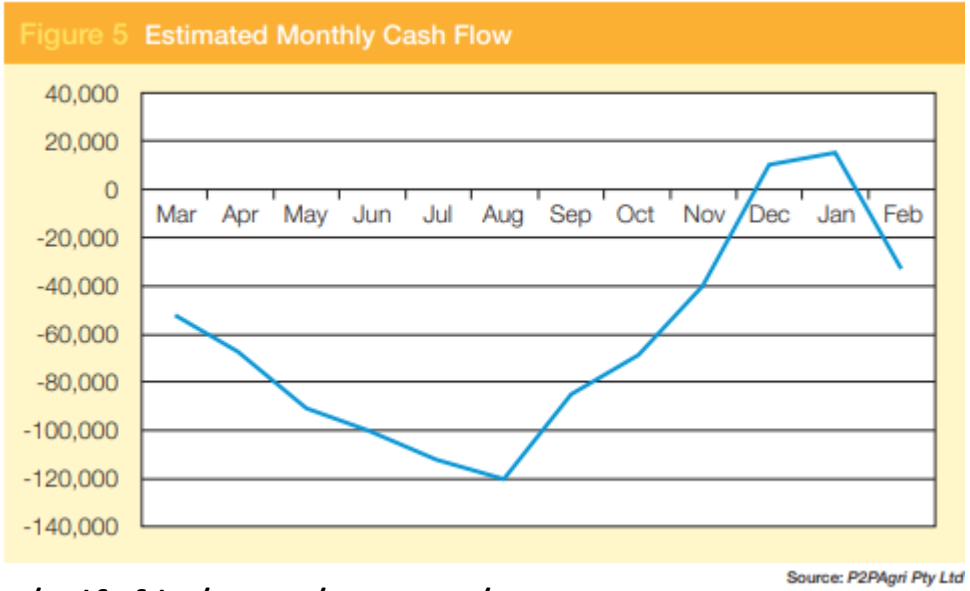
2.1.2 Cash Flow

- An enterprise mostly has a cash flow budget, generally forward looking for at least 12 months
- What is a cash flow budget?
  - Not dissimilar to being at Uni and working out how much money you have in bank/wallet/wherever you store money today
  - How much money will be coming in from wherever you get money
  - What will be your costs in upcoming period
  - Hopefully at the end of the period there is still some money left (or you might need to work out how to spend less or get some extra $)
  - Cash flow budgets are most commonly financial year (July to June) but might also be calendar year (Jan to Dec)

Cash flow

- Generally reconcile a cashflow budget with bank statements on monthly basis (allows re-evaluation if not tracking to expectations)
- E.g. take out another loan, reduces expenses etc





https://grdc.com.au/__data/assets/pdf_file/0024/165921/8135-farm-financial-tool-cash-flow-budget-fs-pdf.pdf.pdf

What does a cash flow sheet look like?

- From https://www.sciencephoto.com/media/299745/view

Prepared by: (Enter your name or business name here)

Date: 16 May 2016

Monthly cash flow forecast template

Select a month to start	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Total
Receipts													Total
Sales	0	0	0	0	0	0	0	0	0	0	0	0	0
Other revenue	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	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
Total receipts	0	0	0	0	0	0	0	0	0	0	0	0	0
Less payments													
Direct costs													
Materials	0	0	0	0	0	0	0	0	0	0	0	0	0
Stock	0	0	0	0	0	0	0	0	0	0	0	0	0
Packaging	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Overheads													
Accounting	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank fees	0	0	0	0	0	0	0	0	0	0	0	0	0
Cleaning	0	0	0	0	0	0	0	0	0	0	0	0	0
Freight and postage	0	0	0	0	0	0	0	0	0	0	0	0	0
Insurance	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest	0	0	0	0	0	0	0	0	0	0	0	0	0
Marketing and advertising	0	0	0	0	0	0	0	0	0	0	0	0	0
Motor vehicle expenses	0	0	0	0	0	0	0	0	0	0	0	0	0
Power	0	0	0	0	0	0	0	0	0	0	0	0	0
Rent	0	0	0	0	0	0	0	0	0	0	0	0	0
Repairs and maintenance	0	0	0	0	0	0	0	0	0	0	0	0	0
Salaries and employee expenses	0	0	0	0	0	0	0	0	0	0	0	0	0
Stationery	0	0	0	0	0	0	0	0	0	0	0	0	0
Subscriptions	0	0	0	0	0	0	0	0	0	0	0	0	0
Tax	0	0	0	0	0	0	0	0	0	0	0	0	0
Telephone	0	0	0	0	0	0	0	0	0	0	0	0	0
Uniforms	0	0	0	0	0	0	0	0	0	0	0	0	0
Website hosting and maintenance	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Total cash payments	0	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flow	0	0	0	0	0	0	0	0	0	0	0	0	0
Opening bank balance	0	0	0	0	0	0	0	0	0	0	0	0	
Closing bank balance	0	0	0	0	0	0	0	0	0	0	0	0	0

Please note! *This is a guide only and should neither replace competent advice nor be taken, or relied upon, as financial or professional advice. Seek professional advice before making any decision that could affect your business.*

But wait….there is more – The livestock schedule

- To work out total value change in an enterprise we need to know more than just cash flow
- For a livestock enterprise we need to know change in value of livestock on the enterprise (if we were doing the same thing in a vet clinic it would be a stocktake of inventory)
- Animals entering the business = purchases plus births (natural increase)
- Animals exiting the business = sales plus deaths plus rations (eaten on farm)
- Livestock are generally counted periodically throughout the year to provide information for these figures along with sales documents

Example

Often opening and closing values are different e.g. valuation of livestock may have changed

This information can then be added to cash flow to understand how the business is performing

Livestock Schedule

AU Enablement Investment Trust
For the year ended 30 June 2017

SHEEP	2017 No.	2017 ($)	2016 No.	2016 ($)
Sale of Sheep				
Total Sales	200.00	50,000.00	300.00	60,000.00
Cost of Sales				
Opening Stock	746.00	67,140.00	1,090.00	95,000.00
Natural Increase	-	-	-	-
Purchases	54.00	4,860.00	10.00	3,450.00
Total	**800**	**72,000**	**1,100**	**98,450**
Less:				
Deaths	50.00	4,600.00	54.00	4,400.00
Killed for Rations	-	-	-	-
Closing Stock	550.00	49,500.00	746.00	67,140.00
Total	**600**	**54,100**	**800**	**71,540**
Total Cost of Sales	**200**	**17,900**	**300**	**26,910**
Gross Profit from Trading	**-**	**32,100**	**-**	**33,090**
Average Cost per Head				
Opening Stock	746.00	67,140.00	1,090.00	95,000.00
Natural Increase	-	-	-	-
Purchases	54.00	4,860.00	10.00	3,450.00
Total	**800**	**72,000**	**1,100**	**98,450**
Average Cost per Head	-	90.00	-	89.50

https://www.linkedin.com/pulse/xero-livestock-schedule-how-build-using-report-templates-sarah-watts/

Profit and Loss

- Sheep/Wheat example
- EBIT = earnings before interest and tax
- Other expenses – depreciation (particularly machinery/infrastructure)

Profit Measures	
Farm Management Profit and Loss:	
Cash Income:	**Annual**
Hard wheat	132,850
Malt barley	104,335
Oats	33,437
Canola	31,500
Beans	2,750
Lupins	3,727
Self-replacing merino	102,378
Prime lambs	23,533
Other farm income	4,125
Non Cash Income:	
Net livestock movements	7,500
FARM GROSS INCOME	**446,135**
Expenses:	
Cash Production Expenses:	
Cropping variable costs	122,857
Livestock variable costs	38,957
Other farm expenses	700
General overhead costs	66,662
Non Cash Production Expenses:	
Managerial allowance	80,000
Depreciation*	38,400
FARM EBIT	**98,559**

https://grdc.com.au/__data/assets/pdf_file/0027/176616/8134-farm-financial-tool-profit-and-loss-budget-fs-pdf.pdf.pdf

Comparing finances across enterprises

- How can we compare non alike enterprises e.g. beef versus sheep?

- Gross margins
  - Common method of comparing enterprises
  - = Income attributable to a particular enterprise on farm less the variable (changeable) costs associated with it
  - Variable costs are those costs that vary with size of enterprise e.g. if you have 100 cows and purchase 20 more, and vaccinated all cattle then variable costs increase by 20% due to increased doses needed
  - A fixed cost is something that wont change with number of cows e.g. cattle yards are unlikely to change if only purchasing a moderate number of new animals
  - Useful examples https://dpipwe.tas.gov.au/Documents/Livestock%20GMs_High%20Rainfall.xlsx

Gross margin

- Can use GM per hectare, GM per DSE (dry sheep equivalent – we will talk about this in coming weeks) or other limiting factors
- Gross margin does not equate to profit as it doesn’t include fixed or overhead costs such as permanent labour, depreciation, interest and rates