



# BECOMING LITERATE

## THE LANGUAGE OF FINANCE

Learning to read the numbers and decipher what they're telling you is a skill that can be learned. **Anne Lee** talks to long-time financial educator **Paul Bird** about the process and discovers the wonder of compounding.

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**B**ecoming proficient in any language takes time and practice. The language of finance is no different.

DairyNZ's Paul Bird has been coaching farmers in the money side of their farming business for more than 20 years.

"Managing budgets and cashflows, doing the accounts – that's not usually what draws people into farming. But when you understand what those things are telling you, when you can look at the numbers and see the story clearly, that's when you can be in control of the narrative," he says.

Paul cites renowned investor Warren Buffett when he says, "Accounting is the language of business."

"There are key accounting terms and financial KPIs (key performance indicators) that tell you where you're at and if you're heading in the right direction. They help you see what's working well and to pinpoint where you need to improve. They also help you make decisions about what to do next, to analyse a venture proposition and see an opportunity.

"If you don't understand those terms and KPIs, it would be like living in a foreign country and not being able to speak the language. Everything would be so much more difficult."

Just as it takes time to become fluent in a language, it takes time to become fluent in the language of money.

"If you were moving to France and didn't speak French, you wouldn't expect to just turn up and be able to converse. You'd buy the CD and put it in your car or download the app on your phone and start by learning how to say the basics."

The dairy sector provides numerous opportunities to learn financial skills whether that's through courses such as those offered by Dairy Training (a subsidiary of DairyNZ) or Primary ITO, online webinars run by farming groups,

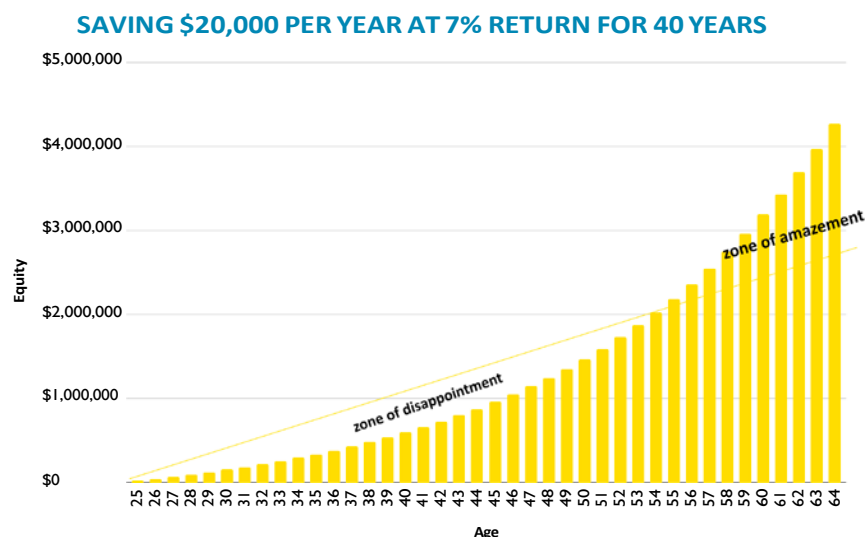
accountants or accounting software companies.

"For those starting out, it might mean asking your farm owner or the sharemilker you're working for, "Hey, when you do your budgets do you mind if I'm involved so I can see what you do and how you do it? Can I sit in when you're doing your cashflows?"

Paul warns people not to get discouraged if they don't understand every concept straight away.

"Persevere and practise and don't be afraid to ask."

Building financial skills isn't just for those starting out. Those who have



ABOVE Paul Bird - grasping the concept of compounding can be a pivotal "aha" moment.

been in business for longer can lean on their advisers and shouldn't be afraid to ask for deeper explanations so they can better understand the advice, ask probing questions and be in control of where the business is going.

### THE WONDER OF COMPOUNDING

"Compound interest is the eighth wonder of the world. He who understands it, earns it ... he who doesn't ... pays it." Albert Einstein.

Grasping the concept of compounding can be a pivotal "aha" moment for people in business, savers and investors alike, Paul says.

The magic happens when people see that by reinvesting the interest or the returns they have made on an investment each year, they then have a greater amount to earn interest on the next year.

Although the percentage return on the investment or the interest rate remains the same year-over-year, the amount earned grows exponentially as the savings and amount reinvested back grows.

#### For example:

\$100 invested at a 10% interest rate will return \$10.

If that's added back to the original investment, it becomes \$110 so a 10% return on that at the end of the next year gives \$11, so the original amount is now \$121.

At the end of the third year, at the same 10% return, the payment will be \$12.10 so you will have \$133.10. The total is growing by a larger amount each year.

Fast-forward 20 years and the annual increase has gone from \$10 to \$61.16 and you have \$672.75 from that initial \$100 even though you've done nothing more than returning the interest back into the account each year.

#### QUICK CALCULATOR HACK

Using your calculator to work out the final compounded value. In this example we use a \$20,000 investment with a 10% or 8% return over 10 years.

**'By returning that interest and sticking with the \$20,000 annual savings you will have put in \$820,000 (in the \$20,000 increments), but thanks to the power of compounding you will have \$4.5m and be earning \$300,453 a year in interest.'**

Now look what happens when you do more than just put in a one-off amount at the beginning and each year you consistently save a more significant amount.

The power of compounding really comes into its own.

A \$20,000/year saving plan at a 7% return (10% adjusted for inflation) will be returning you an extra \$22,097/year. By year 10 you will effectively be doubling what you put in that year.

**Step one**  
Enter the original amount.  
**\$20,000**

**Step two**  
Multiply the original amount by 1 plus the interest rate (if it is 10% this is 1.10, if 8% this is 1.08).  
**\$20,000 x 1.10**

**Step three**  
Press the equals button on the calculator for the number of years you want to calculate the return over (for 10 years press the equals button 10 times).  
**10 years at 10% = \$51,875**  
**10 years at 8% = \$43,178.50**



LEFT Gaining an extra tonne of drymatter can give a compounding return.

Your total savings will have ballooned up to \$315,672 – an extra \$95,000 over what you have put in of your own money.

If you stick with it for 21 years you will have just over a \$1 million savings and each year you will be earning \$68,608.

By the end of 40 years, by returning that interest and sticking with the \$20,000 annual savings you will have put in \$820,000 (in the \$20,000 increments) but thanks to the power of compounding you will have \$4.5m and be earning \$300,453/year in interest.

In the early years, when saving \$20,000/year may be taking big sacrifices, people can feel disappointed that the savings aren't going up as fast as they'd like.

"The magic happens when they persevere and those numbers start rising exponentially – they enter the zone of amazement," says Paul. "Those who truly understand compounding connect daily decisions with long-term wealth creation."

For instance, if better pasture management leads to an additional 1 tonne of drymatter (DM) per year, that's an extra \$350/ha/year added income. For an average 140ha farm, that's an extra \$49,000/year.

But on a compounding basis, at a 7%/year return, over 30 years that's equivalent to \$5m or \$3.6m after tax of additional income.

If you have this mindset, you'll look at your purchasing decisions a bit differently too.

A one-off capital saving of say \$25,000 by purchasing a reliable second-hand vehicle over a brand-new, flash, shiny farm vehicle would be \$190,000 if that

one-off saving was invested at a 7% return for 30 years.

"You've got to think about making your money work for you over the longer term."

Paul says he uses 10% per year as a standard return because historically global sharemarkets have returned that amount over longer periods of 25-plus years.

When he takes into account inflation, that long-term return figure becomes 7% per year.

"What we often see is people in their thirties feeling like it's all just not happening fast enough for them, but there's a point where the exponential nature of compounding means you start seeing those numbers going up significantly every year.

"Hang in there – if you're disciplined the rewards are really worth it." ●

**DairyNZ has several online tools such as:**

- Budget templates for farms supplying each of the major processors.
- Cashflow budgets.
- A partial budget to help analyse options.
- Calculators to assess returns from contract milking and variable order Sharemilking contracts which include budgets.
- A stock reconciliation calculator to help work out the change in livestock values from year to year and to calculate livestock income.
- A guide for calculating return on assets and return on equity.



**THE EFFECT OF COMPOUNDING VS SAVING WITH NO RETURN**



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**Questions**

1. What is the main message Paul Bird is sharing about the importance of financial knowledge for farmers?
2. Why does understanding accounting and financial KPIs (key performance indicators) matter for farmers and business owners?
3. According to Paul Bird, how can someone starting out in farming improve their financial knowledge?
4. What does Paul suggest for those who have been in business for longer when it comes to improving financial skills?
5. What is compound interest, and why is it referred to as the "eighth wonder of the world"?
6. Can you explain how compound interest works using the example in the article?
7. What happens to the amount of money earned from an investment over time with compounding?
8. How does a consistent saving plan, like the example of \$20,000 per year at a 7% return, benefit someone over time?
9. What advice would you give to someone who wants to become better at understanding their business's finances based on this article?
10. How does compounding help your savings grow over time?
11. What happens to your savings if you consistently save \$20,000 each year at a 7% compounding return for 10 years?
12. By year 10, how much will your total savings be worth, and how much extra money will you have earned from compounding?
13. What is the potential growth of your savings after 21 years and 40 years if you continue saving \$20,000 annually?
14. Why might people feel disappointed about their savings in the early years, and what happens over time?
15. How does better pasture management translate into additional income, and what is the long-term benefit of this kind of improvement?
16. What is the example of saving money on a vehicle, and how much could that saving grow if invested for 30 years?
17. Why does Paul Bird recommend using a 7% return for long-term calculations?
18. What advice does Paul Bird give to people in their thirties who may feel like their savings aren't growing quickly enough?