# Demonstrate understanding of cashflow forecasting for a business.

**Duration:** 5-6 weeks

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| **Essence statement:** | Using knowledge & skills to understand the importance of cashflow forecasting to ensure a successful business which allows producers to have control over all spending decisions. |
| **Big Picture:** | An agribusiness requires producers to plan, manage, record keep & monitor their financial progress. Producers need to have an understanding of how much money the business is making & use tools such as cashflow forecasting to forward plan & future proof their businesses. Being able to calculate how much money is required to finance their business, or how much is needed to be borrowed will ensure survival.  The following are important ideas within the Big Picture:   * Understand the importance of cashflow forecasting. * Understanding what finance is required to operate within the primary sector. * Understand the effects external factors may have on the agribusiness. * Being able to adapt & mitigate the external factors to ensure long term viability. |
| **Principles:** | **Coherence:** Creating links between knowledge & skills gained in business to the primary industry.  **Future Focus:** Enterprise & globalisation management decisions that allow producers to enhance & sustain their businesses in primary production. |
| **Values:** | **Excellence,** by aiming high & by persevering in the face of difficulties.  **Innovation, inquiry & curiosity,** by thinking critically, creatively, & reflectively.  **Integrity,** which involves being honest, responsible & accountable & acting ethically. |
| **Key Competencies:** | **Thinking:** Make sense of information, develop understanding, make decisions, & reflect on learning.  **Using language, symbols, & text:** To access & communicateinformation & to communicate this information with others. |
| **New Zealand Curriculum Links.** | |
| **Business Studies: Level 7** | Explore how & why large businesses in New Zealand make operational decisions in response to internal & external factors. |
| **Economics: Level 8** | Understand how the nature & size of New Zealand economy is influenced by interacting internal & external factors. |
| **Agricultural & Horticultural Science Curriculum Level 7:** |  |
| * **Contextual Strand: Markets** | **Learning Objective 2:** Examine how scientific & technological principles are applied to the life processes of plants &/or livestock in order to shape the attributes of primary products for specified markets. |
| * **Contextual Strand: Profitability** | **Learning Objective 4:** Examine a range of factors that influence the profitability of primary production in New Zealand. |

**Note:**

The Primary Industries uses the terminology of cashflow budgeting or a monthly cashflow budget rather than forecasting. They refer to inflow as income & outflow as expenditure.

**Resources:**

* Some of the resources have been prepared by Fiona Clark from Columba College (CC).
* DA = Dynamic Agriculture Year 11-12.

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| **Depth of coverage.** | **Specific Learning Outcomes**  **Students understand:** | **Learning Activities.** | **Resources.** |
| **What’s The Big Picture?**   * Cashflow forecasting is a cornerstone for any successful business & allows producers to gain clarity & control over all spending decisions and the implications of these decisions on the potential surplus or deficit generated. * Understand the importance of cashflow forecasting. * Understanding what finance is required to operate within the primary sector. * Understand the effects external factors may have on the agribusiness. * Being able to adapt & mitigate the external factors to ensure long term viability. | * Positive cashflow ensures producers are able to reinvest in the business, reduce debt, or pay themselves higher earnings. | Possible brainstorming ideas may include.   * What is cashflow forecasting? * What does it tell the producer? * Who else would benefit from understanding this information? * How often should this information being developed & updated? * What seasonal finance would be required to operate? * What finance options are there? * What external factors may affect the business? * Why is cashflow forecasting important to operating an agribusiness? | * Poster paper. * Pens. * <http://www.dairynz.co.nz/farm/financial/budgets/annual-cash-budgets/> * This one might be more relevant <http://www.dairynz.co.nz/farm/financial/budgets/monthly-cashflow-budget/> |
| **Cashflow forecasting.**   * Allows producers to   + Take financial control of their business.   + Assess the viability of new opportunities & borrowings.   + Plan future cash income & expenditure. * Keeping track of the money that flows into & out of your business by actively using a budget helps you to plan & avoid any, often nasty, surprises. * The purpose of a budget is to help you identify if the plans you have are achievable & profitable. | * What is cashflow forecasting. | * What is financial forecast? * Read   + pg. 403 of DA.   + Article Buying at the Bottom <http://www.youngcountry.co.nz/?p=5637>. | * DA * <http://www.youngcountry.co.nz/?p=5637> |
| **What is cashflow forecasting?**   * A cashflow shows the timing of cash income (inflow) & expenditure (outflows). It is a summary of cash income & expenditure over a period of time e.g. season, week, month, quarter or financial year. * For each period of time, it lists:   + projected starting account balance   + predicted cash income   + estimating cash expenses, e.g. bills, salaries, raw materials, assets   + projected ending account balance. * A cashflow forecast is only as valuable as the information & detail put into it, but the ability to continually update & respond to it for changing circumstances. | * Cashflow forecasting. | Brainstorming questions   * Why does a producer need to know this? * What information do producers need? * Where do producers gain their cash income from? * What causes cash flows to fluctuate? * What is a way to show cash flows? * Lesson 1 from CC. * PPT Cashflow forecasting focus questions (CC). | * PPT Cashflow forecasting focus questions. * <https://en.wikipedia.org/wiki/Cash_flow_forecasting> * <https://www.business.govt.nz/tax-and-accounting/business-finance-basics/cash-flow-forecasting/> * Lesson 1 from CC. |
| **Purpose of cashflow forecasting.**   * The main purpose of the cashflow is to estimate the loan repayment capacity of the business, & to determine the level of seasonal finance required to operate. * You can use forecasts to:   + avoid financial trouble   + plan for future cash shortcomings that may impact on your ability to carry out normal or planned activities   + meet your tax obligations   + plan asset purchases   + [plan for growth or expansion](https://www.business.govt.nz/how-to-grow/growth-and-innovation/test-if-you-are-ready-to-grow/) or development/reinvestment   + make informed operating decisions   + benchmark your performance   + test different strategic & tactical scenarios   + figure out the best time to invoice   + [build your case for investment](https://www.business.govt.nz/getting-started/funding-your-business/getting-investors-on-board/)   + forecast the cost of taking on more employees. | * The purpose of cashflow forecasting. * The reasons for forecasting. | Brainstorming questions   * What is the purpose of cashflow forecasting? * Why would you benchmark your performance? – what does it tell you, what are the options available & why you would do this. * Analyse the decision to take on additional staff. Cover not only as an economic decision but also consider; health & safety, work life balance, meeting legal regulations & forecasting the workflow that is required for the business to operate successfully with additional staff members. | * <https://www.business.govt.nz/tax-and-accounting/business-finance-basics/cash-flow-forecasting/> * [www.dairynz.co.nz/dairybase](http://www.dairynz.co.nz/dairybase) is the key link for our dairy industry benchmarking. |
| **Importance of cashflow forecast.**   * Importance & value of keeping the budget up to date, not doing it & filing it * Doing to inform the way you run your business, not for someone else (i.e. the bank) * Prioritising time to manage your money * Involving others * There is a lot of support available for farmers in the dairy industry   + Formal & non-formal training opportunities for farmers in this space   + Tools & resources   + Farmer mentors ([Dairy Connect](http://www.dairynz.co.nz/about-us/services/dairy-connect/)) | * Importance of cashflow management. | * Brainstorm how to engage businesses to carry these things out   + What do you need to do to help a business invest in managing their money?   + What are the motivators & drivers for them in doing this?   + What’s in it for them?   + What value will they get back? * Socialising the following statements as ‘norms’ for businesses when managing their money   + I talk to experts & ask for help.   + I control what I can so that I’m better able to deal with what I can’t   + I know the numbers that are important   + I do it even though I don’t find it easy, because the rewards outweigh the effort. |  |
| **What is a cashflow forecast?**  A tool that can assist in financial forward planning decision making. It is typically presented as a spreadsheet, but many businesses use accounting software & work with their accountants or bookkeepers & rural bankers to ensure greater accuracy.  **Computer spreadsheet modelling**   * Use spreadsheets or other appropriate software to prepare a cashflow forecast for a primary producer. Spread sheet template.   **Graphing & other tools.**   * Excel spreadsheet * Cashmanager Rural * Xero, Figured | * What is cashflow forecasting. * The purpose of cashflow forecast. * Cashflow forecasts as a decision making tool. | * What do you need to get started?   + A cashflow forecasting tool   + Accurate records for forecasting the coming season. | * <http://www.dairynz.co.nz/farm/financial/budgets/> * <https://bizhub.anz.co.nz/resources/cash-flow-forecast-calculator.aspx> * Small-business-cashflow template BNZ |
| **Predicting cash income**   * Cash income isn’t just cash from sales. It includes other sources of money, e.g. cash injections from bank loans, interest on savings & cash income from investments, cash investment by owners. * Use your past financial data to help predict your future cash income. * Include any expected bumps or hits to your cash income, e.g. periods of growth & investment, marketing drives, holiday periods, price received, production changes or impact of weather on production. * Look at sales cycles, seasonal variations, supply curves, advance payment schedules, & relevant stock sale prices. These will help you more accurately predict future incomes of cash. * Personal income from outside the primary production (off farm income) is often included in the cash flow, as this can affect the amount of cash available for business use, & could help reduced seasonal borrowing. * Include three variations of your predicted cash income (also referred to a sensitivity analysis):   + A pessimistic estimate.   + A realistic, or most likely, estimate.   + An optimistic estimate. (Any additional surplus being considered as an opportunity for reinvestment/debt reduction). | * What is cash income. * Why the need to predict cash income. * What are the other sources of cash income. | * What are all the sources of cash income a business can have? * Use the Lincoln University Financial Budget Manual for cash income (prices) of various primary products. * Using primary production magazines, newspapers or internet, obtain current market prices for the primary products. Continue this for several weeks. What trends do you notice? * For a continuous period, establish market price trends for a primary product. What effect will the market price have on producers anticipated levels of production & future production levels? * Read “Farms provide non-farm income opportunities”. | * <https://www.business.govt.nz/tax-and-accounting/business-finance-basics/cash-flow-forecasting/> * Lincoln University Financial Budget Manual * Dairy company payment schedules could be used for milk income predictions. Many of them have live supplier portals which house calculators, or they have regional representatives which will calculate this for farmers. Budget templates are generally set for each dairy company. * The software programmes such as Xero/Figured have automatic update functionality to allow producers to see the impact of changes to milk income. * Dairying has 3 main sources of income linked to the dairy farm: milk income, stock income & other dairy income (such as sale of colostrum, rental for farm houses, rebates, – these will vary between incurring GST & tax). This is referred to as total dairy cash income. There is also non-dairy cash income which can contribute to the total income of the farm. |
| **Estimating expenses**   * [Google +](https://plus.google.com/share?url=https%253A%252F%252Fwww.business.govt.nz%252Fshare%253Flink%253D%252Ftax-and-accounting%252Fbusiness-finance-basics%252Fcash-flow-forecasting%252F%2526element%253D5164) * [Facebook](https://www.facebook.com/sharer/sharer.php?u=https%253A%252F%252Fwww.business.govt.nz%252Fshare%253Flink%253D%252Ftax-and-accounting%252Fbusiness-finance-basics%252Fcash-flow-forecasting%252F%2526element%253D5164) * [Twitter](https://twitter.com/intent/tweet?text=Estimating+outgoings%3A+https%253A%252F%252Fwww.business.govt.nz%252Fshare%253Flink%253D%252Ftax-and-accounting%252Fbusiness-finance-basics%252Fcash-flow-forecasting%252F%2526element%253D5164) * [LinkedIn](https://www.linkedin.com/shareArticle?mini=true&url=https%253A%252F%252Fwww.business.govt.nz%252Fshare%253Flink%253D%252Ftax-and-accounting%252Fbusiness-finance-basics%252Fcash-flow-forecasting%252F%2526element%253D5164&title=Estimating%20outgoings&summary=) * [Email](mailto:?subject=Estimating%20outgoings&body=%0D%0Ahttps%3A%2F%2Fwww.business.govt.nz%2Ftax-and-accounting%2Fbusiness-finance-basics%2Fcash-flow-forecasting%2F%23e5164) * The more detail, the better. * Drill into as many bills & cash expenses as possible, including everything from petty cash to winter heating bills. * Look back over your past cash expenses. * Include any future cost changes, e.g. hiring new staff, forecasted changes to key inputs or paying off business loans. * Add up all the potentials costs of starting & running a business. * Speak to your accountant to make sure your list of expenses is as definitive as possible. * If you are new to the region/area ask around (previous producers, neighbours, supply company representatives). * Types of expenses   + Variable e.g. feed   + Fixed / essential e.g. interest, tax.   + Total. * NOTE: If covering livestock primary production, you will need to also consider concepts such as a stock reconciliation & seasonal management calendar to allow them to accurately forecast the timing of income & expenditure. * NOTE: Expenditure is entered in the months that they are received or paid NOT necessarily the month they occur. | * What are cash expenses. * Why the need to estimate cash expenses. * Types of costs | * What are all the sources of expenses a business can have? * Use the Lincoln University Financial Budget Manual for cash expenses of various primary products inputs. * Read pg. 403 of DA. * [Economic Farm Survey](http://www.dairynz.co.nz/publications/dairy-industry/dairynz-economic-survey-2014-15/) * [DairyBase](http://www.dairynz.co.nz/farm/dairybase/benchmarking/dairynz-baseline-project/) | * <https://www.business.govt.nz/tax-and-accounting/business-finance-basics/cash-flow-forecasting/> * Lincoln University Financial Budget Manual * DA |
| **Different types of Forecasts (budgets).**  **Annual Cashflow Forecasts.**   * An annual cashflow forecast details cash income & cash expenses going out. It indicates if the business is sustainable & estimates any cash surplus or deficit for a financial year.   **Quick Cashflow Forecast**   * A quick cashflow forecast is a condensed version of the annual cashflow forecast that combines the many cash expenses listed under Working Cash (or Farm Working) expenses into one heading. As its name implies it is simplified to give a quick overview of your cashflow situation.   **Monthly Cashflow Forecast**   * All cash income & cash expenses are itemised out month-by-month & any surplus or deficit is shown progressively. Can compare the actual expenditure with the monthly expenditure to monitor cashflow position, & take corrective action where necessary. * It takes the annual cash budget & spreads income & expenses out across the year giving a picture; on a month-by-month basis, of what income to expect & anticipates spending. * It helps to identify potential shortfalls in cash over the year that may impact on the ability to carry out normal or planned activities. * It also informs how much working capital, or overdraft that may be needed to keep the business functioning over those shortfall months. Similarly, having an up-to-date picture of the projected cash surpluses allows to take advantage of opportunities & plan for reallocation of money across expenditure items. Ideally, complete a cashflow budget before the start of each season & set aside time each month to update the forecasted income & expenditure with what was actually received or spent. A cashflow budget needs to a living document that prioritise time to update, monitor & use to make the business decisions.   **Personal budgeting**   * A personal cash budget is for anyone who wants to know where their money is going & gives greater control over personal expenditure. | * The different types of cashflow forecasts. * The structure of a cashflow forecast spreadsheet. * Enter supplied figures. * Draw conclusions based on the cashflow forecast & make recommendations. * Annual cashflow forecasts * Quick cashflow forecasts. * Monthly cashflow forecasts. * Personal budgeting. | * Construct a cashflow forecast. * Work through the guide on constructing a cashflow forecast.   + Cash income   + Cash expenses   + Calculate cash surplus or deficit.   + Analyse & make decisions based on it. * Do Lessons 2, 3, 4 & 8 (CC). * Work through case studies e.g. Brent Bishop Equine Supplies & Farmer Fiona (CC). * Answer cashflow questions (CC). * Answer short answer questions. * What have we learnt so far? (CC) * Consolidate – what have we learnt so far? Sheet. * Students to do a personal cashflow forecast on themselves. Stimulate discussion on if their circumstances change (i.e. they are no longer supported by their parents), & to consider practical ways to reduce/change some of the expenditure they will face. * Do Cash is King! W/s. * Develop a monthly cashflow for the next financial year, including GST. * Calculate the bank balance each month end. * Comment on the need for seasonal finance & whether the existing arrangements will cover it. * Read [Steps to Wealth Creation](http://www.dairynz.co.nz/farm/financial/wealth-creation/) * Complete a spreadsheet using the Bright Sparks Ltd case study (CC). * Discuss & work out on board how to incorporate new figures. * True & false cashflow activity (CC). * Complete Drenched Case Study using cashflow forecasting with actual & variance columns. | * <http://www.dairynz.co.nz/farm/financial/budgets/annual-cash-budgets/> * Annual cash budget pdf. * Annual cash budget GUIDE 7Oct2016 pdf. * Brent Bishop Equine Supplies hand out (CC). * Quick cash budget pdf. * Quick cash budget GUIDE 7Oct2016 pdf. * Farmer Fiona case study (CC). * Short answer questions sheet (CC). * What have we learnt so far? Sheet (CC). * <http://www.dairynz.co.nz/farm/financial/budgets/monthly-cashflow-budget/> * Fonterra\_annual\_monthly\_cashflow\_budget\_September\_2016 * Monthly cashflow forecast. * Personal cash budget guide. * Personal cash budget example. * <http://www.dairynz.co.nz/farm/financial/budgets/personal-budget/> * Cash is King! w/s. * [Steps to Wealth Creation](http://www.dairynz.co.nz/farm/financial/wealth-creation/) * Lessons 2, 3, 4 & 8 (CC). * Cashflow questions w/s (CC). * True & false cashflow activity (CC). * Bright Sparks Ltd case study (CC). * Drenched Case Study (CC). |
| **Partial Forecast**   * Partial forecast is a simple planning tool used to estimate the financial gain or loss by changing some aspect of the business or making a ‘partial’ change to the business. * It focuses only on the changes in revenue & costs that would result from implementing a specific alternative rather than including all revenue & costs. * A partial forecast is often used to initially evaluate ideas, with further analysis e.g. annual forecasting & cash flows completed once the most likely option is selected. | * Partial forecast. | * Why partial forecast? * Read pg. 405 of DA. | * <http://www.dairynz.co.nz/farm/financial/budgets/partial-budgeting/> * Partial\_budget\_format[1] * DA |
| **Managing a cash surplus or deficit.**  **Cash surplus**   * How will you use this surplus?   + Investing back into your business.   + Pay off debt   + Seek off farm investment opportunities * Should reflect your business goals.   **Cash deficit**   * What is the issue? * How is it going to be fixed? * What changes do you need to make? * Review production & cash expenses. * What seasonal finance is required to operate our agribusiness? * Seasonal finance requirements. * What responses are going to occur? | * Cash surplus * Cash deficit. * The structure of a cashflow forecast spreadsheet. * Enter supplied figures. * Draw conclusions based on the cashflow & make recommendations. * Amend spreadsheets. * Forecasting with 2 columns – forecast & actual. * Credit transactions. * Loan applications. * Overdraft * Forecasting with actual & variance columns. | * Do Lessons 5, 6 & 7 (CC). * Do Computer Business activity (CC). * Do Market Mike activity (CC). * What responses could occur to offset a cash deficit?   + Loans   + Overdrafts   + Owner contribution   + Additional investment source e.g. company share issue, partnership. * Complete Market Mike Case Study on using cashflow forecasting as a basis for a loan application. * Complete Eco Quads Case Study on using cashflow forecasting to determine overdraft needs (CC). | * Annual cash budget GUIDE 7Oct2016 pdf. * Computer Business activity (CC). * Annual cash budget GUIDE 7Oct2016 pdf. * Market Mike Case Study (CC). * Eco Quads Case Study (CC). * Lessons 5, 6 & 7 (CC). * Market Mike activity (CC). |
| **Sensitivity analysis**   * Once you have completed your budget, it is useful to look at how sensitive your forecast is to changes. * Running sensitivity scenarios allows you to gain a clear picture of how exposed your cash position is to risk. It also equips with key information to allow you to review your budget to ensure you will be able to meet your goals & targets even when unexpected situations arise. | * Sensitivity analysis | * Carry out some ‘what if’ scenarios, looking at possible situations that will impact on cash position or bottom line. What would happen if:   + Production decreases by 5% or 10% due to drought?   + Production increases?   + Milk income lifts or drops?   + Key expenses spike (e.g. fertiliser costs increase by 15%)? * Lessons 9, 10 & 11 (CC). * Do Mas Titus’s Farm activity (CC). * Go over Notes / Questions (CC). * Do AGFEST activity (CC). * Do Strawberry Festival activity (CC). | * Lessons 9, 10 & 11 (CC). * Mas Titus’s Farm activity (CC). * Notes / Questions (CC). * AGFEST activity (CC). * Strawberry Festival activity (CC). |
| **Involve others**   * Working in a business inevitably means working with other people who will have direct & indirect influences on how the business performs & how well (or poorly) the business sticks to the budget & achieve business goals. * Engage the staff & other key stakeholders in relevant parts of the budgeting process. Be transparent about expenditure levels & involve staff by asking for ideas on how to make cost-effective decisions. * It may be useful to develop a finance policy that staff have access to & ensure they understand spending decisions, delegated authority’s, & desired outcomes. * Take advantage of the rural professionals who support the business (banker, accountant, consultant, veterinarian, supply store staff, & company representatives). They will be able to provide a range of valuable information on market trends, input costs, & general advice on how to fine tune the business to be productive & profitable. | * Who can help them with cashflow forecasting. | * Who can help them with cashflow forecasting? |  |
| **Monitoring & updating cashflow forecast.**   * Forecasts / budgets are management tools & should be reviewed monthly to monitor actual income & expenses against what was forecast. * They need to be monitored & updated regularly to ensure that you are more proactive rather than reactive – to concentrate on fire prevention rather than firefighting. * When reviewing & updating your budget, assess the difference between the forecast & the actual figures. Identify actions you need to take based on the variances:   + Is spending getting out of control in any areas? If I have spent too much in one area, where can I recoup that money from in another area?   + Was income higher than anticipated? & how will this impact on your working capital needs?   + Can unexpected positive variances be reallocated to other areas of the budget to improve overall productivity & profitability? * Key times to prepare, review & update budgets are; during the season, at the end of the season & if there have been any major changes in cash income or expenditure.  1. Prepare annual & monthly cashflow budgets at least two or three months before financial year or season begins. 2. During the season to compare actual to forecast figures (ideally monthly) or when change occur; e.g. Milk income is reforecast – keep up-to-date with milk company announcements & calculate the impact the change will have.    * Expense cost variations – e.g. fuel prices increase, feed costs change from what is planned.    * Major un-planned expenditure (e.g. new tractor, additional bought in feed)    * Unexpected changes to production or adverse events such as floods, drought. 3. At the end of the season    * Compare actual to forecast figures    * Use this information to prepare budgets & management plans for the next season.    * Evaluate key performance indicators  * Remember to keep focus on profitability rather than solely productivity.   **Evaluation.**   * Compare the cashflow forecast with performance measures of your business e.g. return on capital, return on equity, changes in equity, changes in working cash expenses, key performance indicators. * Can be compared with other similar businesses if possible. | * Monitoring * Updating the cashflow forecast. * Evaluation of the cashflow forecast. | * Why need to monitor & update the cashflow forecast? * What is an evaluation? * Read ‘Upkeep suffers as pending is cut’ article. * Monitor & review the cashflow on a monthly basis for at least a 3-month period. * Prepare an actual cash income & expenditure for each month. * Compare actual cash income & expenditure with the forecast. * Comment on significant differences. * Recalculate the cashflow forecast to reflect any differences between the original forecast & actual cash income & expenditure. | * [https://producersweekly.co.nz/section/horticulture/view/upkeep-suffers-as-spending-cut](https://farmersweekly.co.nz/section/horticulture/view/upkeep-suffers-as-spending-cut) |
| **Know the causes of cashflow problems.**   * Not doing it — cashflow forecasting is an effective tool to prevent financial trouble. * Being overly optimistic when predicting future cash income - to have any real merit, your predictions need to be honest & backed up by data. * Not documenting your current financial activities — your past cash income & expenditure will help you accurately predict your future cash flow. * Another big problem is communication. Often in primary production businesses the person who develops/updates/monitors the budget is not the person who spends the money. This can cause big problems. If a partnership in place, all partners need to carry these tasks out & own the budget. | * Know the causes of cashflow problems & identify solutions. | * What are the causes of cashflow problems? |  |
| **Assessment.**  AS91868 Agribusiness 2.10 Demonstrate understanding of cashflow forecasting for a business (4 credits) Internal. | | | |