NURSERY MANAGEMENT

Information coming through to Comm Hort suggests that most businesses in the nursery trade are down in turnover around 25% this year. The causes are continuing rain and bad weather, plus the dampening effects of an inflationary economy on market demand.

While Spring is now on the doorstep with its promise of better times, many companies are also looking inward to see if they can improve their bottom line. Des Snell here offers some ideas to help you do that and save costs in your business

The road to a healthy, profitable business - a look at saving costs

WHEN THE going gets a little tough in business, it's a good time to take a step back to look at your costs and how you might be able to reduce them, and check on how you are doing things and whether you might be able to do them better.

Unfortunately, because businesses are so diverse both in size and in the nature of what they do, there is no one answer that fits all, but there are some general principles about cost saving that are common to most.

What this article aims to do is to "get the conversation going" so that over time a culture of searching for savings and better systems becomes the norm in your business.

Peter Drucker, the author of more than 30 books on management practice and philosophy, is known for many memorable quotes, but two of his best known are: "If you can't measure it you can't improve it" and "Management is doing things right; leadership is doing the right things."

If you're looking at reducing

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costs and improving efficiencies in your business, both of these quotes need to be taken to heart, and they are linked.

For instance, are you doing the right things now? Or are you just managing the way things have always been?

To answer those questions you first need to measure, or more accurately, closely examine, what is going on in your business, how things are being done and what they are costing; then you have a solid basis on which to ask "is this the right way?"

So, after you have had a good look around, and perhaps come to some conclusions of your own, sit down with your staff, share your thoughts and ask for input and suggestions. They are the ones at the coal face every day and may be well aware of immediate improvements that can be made. If not, at least this will set them thinking; so it is worth having another meeting after a week or two.

Measuring costs before making changes

Often when people look at saving costs in a business they are immediately drawn to the most obvious ones, like the power bill, without first studying what *all* the costs are in their business and identifying the ones where savings will make the most difference.

In order to help you in this we have put together a simple Excel spreadsheet into which you can key in your own sales, income and cost figures to see what happens when you change them. You can get these figures from the Profit and Loss Statement in your last set of accounts.

A representation of the spreadsheet is shown opposite as Table 1 and the live file is on the Comm Hort website www.nursery.net. nz. Use the link in right column of the home page then open the chart in your own copy of Excel.

As you over-type the sample figures in the spreadsheet for each cost item, the next column shows what percentage each of these is of the total costs of your business. You can then quickly see 1) where the big costs really are, 2) identify which ones you are realistically going to be able to change 3) what happens to the bottom line if you were to make 3%, 5% 10% or whatever savings to selected items and therefore 4) which ones are worth the trouble going after.

The spreadsheet is not intended to present a complete picture of your business as it doesn't cover such things as depreciation, changes to inventory value and various other journal entries that your accountant will make at year-end. It does however give you instant feedback on what would happen when you save on various day-to-day outlays.

In the column headed Attempted Change, we have put in a 3% increase on income and -3% on items where savings are being sought. Obviously, change these to the percentages you think might be possible for you – or set them at zero where you can't see any chance of making change.

As you enter your new attempted percentage savings figures you will see the impact on your bottom line can be quite significant and hopefully that will guide you to where to direct most of your attention.

On the sample we have set up, note that the 3% increase in income and 3% savings on all costs



 Table 1. Download this Excel spreadsheet from www.nursery.net.nz

 See link on right column of the home page

Open it in your own copy of Excel then you can change the numbers and names as you wish to see what would happen to your bottom line if you were to make savings to various items, or increase income.

The figures you use should come from your last Profit and Loss Statement.

The % of Total column will show you which of your costs is significant and worth chasing

Change the -3% Attempted Savings for each item to -5% or -10% or whatever you think you can achieve and you will instantly see the effect on your bottom line.

Note the significant effect to Profit when both making savings

compound into a more than 18% lift in gross profit margin, so well worth chasing. Don't forget though, that to make some of the savings, new costs may be incurred; so they need to be taken into account as well.

The compounding effect on bottom line profit seen in our chart sample is a phenomenon arising from increasing both income and reducing costs *at the same time* and won't be achievable if only one of those drivers is changed and not the other.

Can sales/income be increased in the current economic climate? Increasing your prices is the easiest way to do that so long as it does not result in lost sales overall. But remember, it is not necessary to increase all of your prices to get an overall 3% or whatever increase you are seeking.

A close analysis of your product range will reveal which lines are the most profitable and which are the most market price sensitive so by studying these you can make selective price increases a little more scientifically than just making sweeping increases across the board.

Staff and wages – they are the biggies . . .

As you can see from our sample spreadsheet, the wage bill is by far the biggest cost in the sample business and this is likely to be the case in many NZ businesses. We don't have definitive figures about average staff cost increases

	Income				
	Before		Attempted	Income After	
	Change		Change	Change	
Sales	1,000,000		3%	1,030,000	
Interest/Tax Refunds etc	5,000		3%	5,150	
Other Misc Income	2,000		3%	2,060	
			3%	0	
Total Income	\$ 1,007,000			\$ 1,037,210	
	Costs Before	% of Total	Attempted	Costs After	Savings Mad
	Savings	70 01 10141	Savings	Savings	in \$
Staff	450,000	45.00%	-3%	436,500	-13500
Mortgage/Rent	45,000	4.50%	-3%	43,650	-1350
Interest	8,000	0.80%	-3%	7,760	-240
Insurance	5,000	0.50%	-5%	4,750	-250
Accounting/Other Fees	5,000	0.50%	-3%	4,850	-150
Marketing/Advertising	5,000	0.50%	-3%	4,850	-150
Office/Phones/Internet	8,000	0.80%	-3%	7,760	-240
Seeds/Gols	25,000	2.50%	-3%	24,250	-750
Growing Media	20,000	2.00%	-3%	19,400	-600
Pots Trays etc	38,000	3.80%	-3%	36,860	-1140
Fertilisers	5,000	0.50%	-3%	4,850	-150
Herbicides etc	5,000	0.50%	-3%	4,850	-150
Freight	10,000	1.00%	-3%	9,700	-300
Power	8,000	0.80%	-3%	7,760	-240
Water	6,000	0.60%	-3%	5,820	-180
Gas	2,000	0.20%	-3%	1,940	-60
Vehicles	8,000	0.80%	-3%	7,760	-240
Equipment/Maintenance	35,000	3.50%	-5%	33,250	-1750
Other Costs/Expenses	30,000	3.00%	-3%	29,100	-900
		0.00%		0	0
		0.00%		0	0
Total Costs/Expenses	\$ 718,000			\$ 695,660	-\$22,341
			Profit on		
Profit on Costs Before			Costs After		
	A			A 944	
Savings	\$ 289,000		Savings	\$ 341,550	
			Profit		
			Increase	18.18%	

in the NZ nursery industry but the US nursery industry reckons its wages bill has risen 25% since 2019 so it is likely to be something of that order here too.

There are limited options as to what can be done about this – after all, you need good people to get the work done. However, if you can streamline your processes and make staff more efficient and productive at what they do and with less waste, you may free up some of their time which can then be applied to other tasks.

A nursery owner recently told Comm Hort that by installing a potting machine he can now do with three people what used to take six, which is great. However, that improvement and investment will only reflect on the bottom line if a) the nursery turns out significantly more plants than before, but with the same staff (and do you want more plants in today's economy?), or b). the freed-up staff can be directed to other tasks, eventually meaning a cut in overall head count by not needing to replace people as they leave or taking on fewer seasonal casuals.

Either way – by introducing automation or by improving processes and productivity – you are eventually seeking to do the same amount of work, or more work, with fewer staff.

We won't get into automation

too much in this article, but we will look at some areas where cost savings or better ways of doing things might be possible and should improve the overall health of your business.

Credit Cards – are they carrying embedded debt?

At some stage in the past you may have needed to use a credit card, or two or three, to purchase items, or even to get by. What can happen, when that time of need has passed, is that you don't bother to clear all of that old debt off your cards, you just pay enough each month to cover the previous month's spending.

But credit card interest is high,

NURSERY MANAGEMENT

typically more than 20% per annum. So if for example you have a credit card with say \$3000 'embedded' debt just sitting there, it will be costing you interest of around \$50+ per month, or \$600+ per year. That's well worth saving and is one of those savings that don't cost you much to achieve - only the interest you would have received if you had had the \$3000 on term deposit.

Bank Accounts – are they earning their keep?

Many companies have more money in their Current Business Trading Account than they need to cover everyday costs, and don't take the time to project how much they will need going forward. Those Current Trading Accounts typically won't be earning interest.

Over the past few years it has not been worth looking for other types of accounts to hold some of those funds because the interest rates offered haven't been high enough. Lately however, banks have put in place a range of shortterm investment accounts, some

Electricitv charges can vary quite a bit throughout the day so it pays to stay away from the peak periods where Charge your EV Price possible during this time for half-price! Night Peak Shoulder Peak Shoulder

even allowing money to be withdrawn on-call without penalty, into which you can put funds not immediately needed - well worth checking out as once they're set up it takes very little to move funds around.

Easing the tax payment burden

If you know your sales and cashflow income are going to be down over any period of time but will come up again later - ie, they will be down over this Winter but bounce back in Spring - you can set up a plan on the IRD website to pay down your taxes in instalments over time.

This can be for amounts that are due now or will be due later. According to the IRD website there is no fee to set this up, and you won't be charged penalties or interest on currently owed amounts. Interest is charged on overdue amounts but gets included in the weekly or fortnightly instalments you set up.

If you haven't got an IRD account Google "Apply for an instalment arrangement". If you have got an IRD account, log in at myIR, click on 'I want to' then 'Payments.'

The Power Bill

Here we are talking about power savings again. Your Profit and Loss Statement will show you how significant your power costs are and whether it is worthwhile trying to save on them.

There are not many stats available on small business power usage, but there are some on domestic household use, which can

New nursery programme now includes water conservation

Have you worked in nursery production for at least three years? The refreshed New Zealand Certificate in Nursery Production (Level 4) has the key skills to grow your career.

After a review and input from industry experts, the programme now includes new topics with optional skills to suit all nursery businesses. One of those is water conservation and how this applies to a horticulture operation.

"Knowing how to conserve water including recycling and reusing is very important, especially to guarantee the supply of this critical resource." says Primary ITO sector manager for nursery production, Tom Antscherl.

The new programme is now a New Zealand Certificate (rather than an apprenticeship) so the length of time has reduced and new knowledge can be applied sooner.

For more information or to enrol visit primaryito.ac.nz/nursery



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COMMERCIAL HORTICULTURE, AUGUST/SEPTEMBER 2023

SAVING COSTS

be a guide to what might be possible.

Consumer NZ says some household power users are saving 20% of their costs by doing just two things: 1) changing to a cheaper power provider and 2) powering appliances during off-peak hours, like charging batteries and EVs overnight, so something similar should be possible for businesses.

Consumer has a Powerswitch. org.nz website which has a lot of information about power usage and savings and switching providers and while this is set up primarily for household users it does shed light on how the electricity market works.

For businesses it suggests contacting a broker, like EMP (Energy Management Professionals) to work out an energy plan, or contact the power providers direct. It names them as: Comtricity, Contact, Ecotricity, Electric Kiwi, Flick, Frank Energy, Genesis, Globug, Megatel, Mercury, Meridian, Nova, Octopus Energy, Powershop, Pulse Energy, Tensor, and Toast.

It is even worth approaching your current provider and ask whether you are on the right plan.

"In this electricity market, you're not rewarded for loyalty," says Consumer.

"It's in your best interest to shop around every few years to see whether another provider can offer you a better deal. When it comes to electricity, it's all the same quality so you might as well be getting the cheapest and most suitable deal for you."

Also worth noting: night rates for electricity, say from midnight to 6am, from most providers are about half what they are for the peak periods of 6am to 9.30am and 4.30pm to 8.30pm. The socalled shoulder rate, from about 9.30am to 4.30pm is about 20% less than peak so that is when

State of the industry - things certainly aren't what they were

O GET some comments on the state of the industry and what businesses should be doing to improve their lot in difficult times, Comm Hort went to Philip Smith of Totara Glen Nursery.

Philip is well connected through the nursery industry and has many years experience having worked in small and large nurseries, including Taupo Native when it was run as a corporate.

Also, he worked in an accountants firm as a trainee before starting Horticulture Science at Massey and has since completed business and financial admin papers to upskill - so who better to make some comments . . .

"Yes, your spreadsheet is a good discussion starting point for people talking over pressure points for profitability," said Philip.

"But different nurseries have different structures and that has a huge effect on their bottom line. The reality in New Zealand is that the majority of small businesses operate straight on cashflow, which is quite different to the corporate-type world."

There are only a few nurseries in NZ that are corporates, said

Philip, then there is a layer of medium-sized nurseries who would also be accounts-literate and would be constantly tracking

what is happening in their businesses. This would include big picture items like debt servicing and inventory control which have a major effect on profitability. "I don't think many

smaller nurseries look at their accounts during the year. They look at them once

when they are produced to see what their provisional tax will possibly be and just go from there.

"Especially smaller operators or operators who have no accounting ability; they leave a lot in the hands of their office manager or receptionist or whoever is doing their invoicing and paying bills, but they are not looking

businesses should be using their equipment and try not to stray outside of it.

Educating staff to turn off lights when not needed is also worth doing as is installing, in some areas, motion switches which turn lights on when someone enters a room, and off when they leave. There are now also "smart" lights on the market which can be con-

Smart light bulbs can be controlled by an app on your phone



at their stock and stock management, which is a big part of profitability."

"In my experience even some verv successful business people and accountants struggle to understand the complexities with management accounting in some nurserv business structures. I also have interests in dairy and dry stock farming, and they are in general far less complicated than a production nursery ope-

ration."

The current business environment is also challenging and different to how things were 20 years ago, says Philip. Uncertainty is a major problem and there is not much fat in the system.

"Years ago you might have had a bit of reserve

here or there but these days people are pretty well strung out, which makes matters worse if you are struggling with cashflow.

"Most smaller businesses operate on a cashflow system and cash is king. They don't really often look at the bigger picture and that's certainly what you need to be doing if you are a business with some debt. You really need to have that sorted.

trolled remotely by a phone app.

LED bulbs use about 75% less energy than normal incandescent bulbs and are reckoned to last 25 times longer so, although they are more expensive to buy, will more than repay themselves over time.

People also say to switch equipment and computers etc off at the wall when not in use as they continue to use power when simply switched off, but that can be a nuisance.

A possible answer in some cases might be a "smart switch." These plug into the normal 3-pin wall socket and you plug your equipment into them.

They are not very expensive and come with an app so you can control them remotely from your cellphone.

They can even respond to voice commands. Common brands are Tapo, Philips and Wemo.

continued overleaf

"Also uncertainty - years ago you would know what you would be doing two and three years out turnover-wise: from a feel of the market and everything else. Crickey, in the last 10 years you're lucky if you know what you will be doing six months ahead because you just don't know what is going to happen.

"Look at the ornamental market: a lot of people have got out of the industry and others have collapsed so there is not much fat in the system now. In native plants there is so much central government funding -- what will happen if that runs out?'

Philip says most nursery businesses today have wages between 25% and 50% of turnover.

"The old standard for nurseries was 30:30:30 - where 30% of your turnover went to wages, 30% to costs and 30% should be gross profit. I know some people today have costs around 45-46%, but then there are some that are down around the 25%.

"Net profit after interest and tax in the old days, the Maggie Barry Garden Show days, could be 20-30% but these days I think people are aiming for between 8% and 10%. I think if you're doing 10% after the owner has taken out their wages/drawings, you'd say that's okay."



Philip Smith



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NURSERY MANAGEMENT

A look at saving costs

continued from previous page

More efficient water use can bring big savings

Water can be a significant cost for nurseries so keeping an eye on it is a good idea. Have you checked for wastage in your-supply lately?

The easy way to do this is to turn off every tap and irrigation system that is connected to your town supply one evening and check the meter reading – and even whether the meter has stopped turning! Check the reading again in the morning and if the numbers have gone up, you know you've got a leak.

Next thing is to find out where

It is reckoned that

installing heat

pumps to provide

hot water for

greenhouses

brings very

significant savings

in energy costs

that leak is and that can sometimes be difficult. Growing Spectrum nursery in the Waikato last year saved thousands of dollars annually by fixing an underground leak they didn't know they had.

now they had. They employed a

local water management company, Knode (www.node.co.nz) to locate and fix the leak then went on to have it install a watering system that splits the nursery into nearly 100 zones, each with its own watering regime, and all controlled from the front office.

You don't need to go that far though – Growing Spectrum saved \$14,000 per year just by fixing the leak.

Before we leave water issues, there was a good article we ran in Comm Hort on irrigation back in 2018 by Michael Danelon, then Business & Technical Support Officer at the Nursery & Garden Industry Association of NSW & ACT (and thanks to them for reprint permission).

"When was the last time you tested the irrigation system performance?" Michael asked in that article, "tools such as pressure gauge, cup tests and stopwatch to measure application rate, uniformity and optimum pressure for each sprinkler?" You can read this article from a link on the right column of the www.nursery.net.nz website.

Another resource worth checking out is the technical resources website of the Queensland Nursery Industry Assn www.ngiq.asn. au/resources/technical-information/ where there are many educational videos on a wide range of nursery production issues. Check out the ones under "Water and Irrigation."

Back in 2014, John McDonald who was then industry development manager for the NGIQ (he is now National Biosecurity Manager with Australian nursery industry industry body Greenlife Australia) made an enlightening presentation to the NZ nursery industry annual conference in Tauranga on saving money on ir-

rigation.

He asked the audience: "How many of you guys have replaced a pump in the last five years, not just replaced an old clunker with a new clunker, but with a new, modern pump? Was it a multi-stage, varia-

ble-speed pump?"

John said these new pumps are at the heart of setting up sophisticated, computer controlled irrigation systems because they allow a nursery to be split into 'irrigation zones' where water can be brought to plants at different pressures and frequencies depending on the requirements of different crops and what stage they are at in the production cycle – "too many nurseries irrigate newly planted crops as though they are mature plants."

John gave some figures for savings made and improvements gained by a group of growers in Queensland he and colleagues worked with over a 4-year period to upgrade their irrigation systems and associated management practices.

Pesticide application was reduced by 30% (meaning crops were healthier and required less labour in maintenance); overall water use was reduced by 32%; crop turnover improved by 28%

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(a quarter more production from the same overhead structure); crop growth improved by 20%; and crop uniformity by 25% (meaning reduced labour costs in picking orders of like plants). There were also substantial savings in energy expenditure.

So check out the NGIQ technical resources website mentioned above for more detail on how these savings can be achieved.

Heating Costs –many ways to save

If you've got heated propagation houses or other structures, heating costs are obviously going to be a biggie for you.

The myriad ways of achieving savings are beyond the scope of this article but some simple fixes may be possible.

Energy audits carried out on 26 propagation nurseries in Queensland in 2022 to identify energy savings found what might also be the case in NZ – that several were still using hot water-circulating systems designed back in the 1980s and that there were some quick and easy cost-saving improvements possible.

"Although these systems are simple and do heat water for the propagation benches, between 25% to 40% of the energy used to heat the water is lost to the atmosphere before it reaches the plant's root zone," the report said.

The suggested improvements are shown in Table 2, but the report noted: "the simplest fix is to insulate your heating head pipes and if possible, the distribution pipes. This can be done either by installing an insulation wrap or lagging used on hot water pipes to stop heat dissipation during heating and transfer.

"Upgrading an old analogue thermostat control to a digital control unit can reduce heating costs as new digital temperature control units are more accurate and allow more precise temperature control."

The Table 2 chart shown opposite serves one other purpose – it is an example of the principle that no matter what equipment or process you improve in your business the payback time will probably not be immediate.

We published an article on the

Solution	Cost to Implement	Energy Savings (kWh/yr)	Cost Savings (\$/yr)	Payback (years)	Return on Investment
Upgrade thermostat controls & calibrate sensors	\$185	393	\$81	2.3	44%
Insulate heating head pipe & distribution pipe	\$614	2,094	\$479	1.3	78%
Add traditional hot water system & insulate pipes	\$2,549	8386	\$1855	1.4	73%
Replace with solar hot water, insulated tank & new hydronic heating mats	\$9,465	11,041	\$2173	4.4	23%
Replace with heat pump, insulated tank & new hydronic heating mats	\$17,500	18,000	\$3,712	4.7	21%
Upgrade the greenhouse to retain more heat	\$59,000	8,000	\$11,650	5.1	20%

 Table 2: some of the energy saving upgrade options identified after energy audits carried out on 26

 propagation nurseries in Queensland in 2022, the potential economic benefits and payback times

above heating report in Comm Hort courtesy of the NGIQ and you can read it from a link on the right column of the www.nursery. net.nz website.

Heat pump co-funding subsidies are available

If you are looking to upgrade your water heating facilities, you can now apply for 50% co-funding, up to \$150,000, through the NZ Energy Efficiency and Conservation Authority (EECA).

This funding is available for businesses wanting to replace current electric or gas generated hot water systems with the latest heat pump hot water systems.

The EECA says making the change is easy and that its "panel of experienced suppliers will manage the whole process."

Operating costs it says "are typically around 25-35% of an electric resistance unit, or around 50% of an equivalent gas unit. Hot water heat pumps can reduce energy bills by 3-5 times."

Google "eeca hot water heat pump programme" for more information on this, how to apply, and a list of approved installers.

Improving Processes – continuous improvement

The management experts all tell us that while major restructuring and the introduction of automation can make significant improvements to a business, an accumulation of small improvements can also have a major effect and often cost very little. The principles of Lean Manufacturing come in here and are well worth becoming familiar with.

We have run articles on Lean in Comm Hort over the years so rather than get too far into it here, we have put a couple of these up on our website. You can check them out at www.nursery.net.nz see Lean Articles 1 & 2, right column of the home page.

Just a sample though -- here is the type of simple change that can make a big difference. One of the principles of Lean is to ensure that everyone has everything they need for their work at hand whenever they need it, whether that be materials, tools or equipment.

A simple way to ensure tools don't stray too far from where they should be is to colour code work areas. So if one area of work is to be orange, paint the handles of all the tools used there orange, and dab orange on any crates, equipment, trays or anything else that belongs to that site, then it will always be easy to spot these items when they get into places they shouldn't be.

In conclusion

NURSERY MANAGEMENT

As we said at the start, the main purpose of this article is to help you get the conversation and processes going on saving costs and getting more efficient in your business.

The little Excel spreadsheet gives you some definite items to start with and will help you see what might be possible.

Don't forget though, that the decisions you make regarding controlling staff costs, debt management and servicing, setting prices, inventory control, and closely linking production to demand, will be the major ones that will impact your bottom line.



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