

SLICK OPERATORS: THE ART OF TIME MANAGEMENT ON A BUSY FARM

Jeremy Duckmanton and Terry Kilday

Foreword

Over the past decade dairy farms in New Zealand have grown in size and complexity. Between 2000 and 2010 the average herd size in New Zealand increased 148%, from 251 cows to 371 cows (DairyNZ, 2010). In the 2009/10 season, 23% of the herds milked in New Zealand were larger than 500 cows and 3.2% were larger than 1000 cows (DairyNZ, 2010). As dairy operations get bigger, good systems and routines are becoming more critical to achieving high performance.

Highly profitable farms require timely and well-researched decision making. To implement these decisions, you need a well-skilled and co-ordinated team of staff who are clear on what is required and why it is important. A major challenge on most dairy farms these days is that it is not always the person with the skin in the game doing the tasks. However, there are farmers and managers out there whose farms demonstrate exceptional operational efficiency while achieving high performance. These 'slick operators' are well organised, good at prioritising critical tasks, and able to motivate their team to understand how to complete tasks to a standard which drives high performance.

The following two farmers were asked by the SIDE organising committee to comment on the key aspects which contribute to a slick operation. Both of these farmers are well respected and recognised amongst their farming peers for the quality and performance of their large-scale operations.

Corrigan Sowman, SIDE Organising Committee 2011

Farmer background

Jeremy Duckmanton, lower order Sharemilker for Stewart Partnership Ltd

- Completed Diploma in Farm Management in 2001 at Lincoln University. Before and after this, worked for Leon and Bronwyn McKavanagh for a total of eight years, from junior through to managing their 650 cow sharemilking position.
- Started Whyduck Dairying Ltd and began lower order sharemilking in 2008 for the Stewart Partnership Ltd in Rakaia milking 950 cows on a new conversion. This has now grown and will milk 1600 cows next season.

- 2010 Canterbury/North Otago Sharemilker of the Year, runner up in the national competition. Outside of work very active playing cricket, squash, golf, and a member of the Pendarves rural fire unit.

Farm Details

- 2010/2011 wintered 1600 cows, peak milk 1550 cows on 355 ha effective.
- Manage four fulltime staff plus permanent casual working four days per week.
- 70 bale rotary cowshed with ACR's, 800 cow yard.
- Five center pivots and one Roto-Rainer.
- Production Budget 713,000kgMS, 460kgMS/cow, 2,000kgMS/ha.

Terry Kilday, Operations manager of Camden Group, a proven high productivity and benchmarked farm

- Completed B. Com. Ag. Farm Management in 2000, spent 12 months on Camden Farm with Leo Donkers in 1995 as part of this degree.
- Re-joined the Camden Group on Willsden Farm as the Farm Manager in March 2003, managing five other staff.
- Became Operations Manager for Willsden Farm and Prairie Farm in November 2010.

Willsden Farm

- 1070 cows wintered, peak milk 1040 cows from 306 effective ha.
- Six full time staff including a farm manager and 2IC.
- 50 bale rotary cowshed, retro-fitted ACRs, 650 cow yard.
- One centre pivot, five Roto-Rainers, 12 strings K-Line.
- Production budget 445 kg MS/cow, 1,512 kg MS/ha, total 462,800 kg MS.

Prairie Farm

- 1055 cows wintered, peak milk 1010 cows from 274 effective ha.
- Six full time staff including a farm manager and 2IC.
- 50 bale rotary cowshed, retro-fitted ACRs, 750 cow yard.

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- One centre pivot, three Roto-Rainers, 14 strings K-Line.
- Production budget 440 kg MS/cow, 1,622 kg MS/ha, total 444,400 kg MS.

Introduction

There are many attributes that make a slick operator. They have high personal standards, take pride in their work, are competitive and successful in the industry while being environmentally and publically sound, and lead from the front setting an example for their employees. Above all a slick operator is highly organised, putting forethought and planning into daily, weekly and seasonal tasks. High performance can be achieved because they employ good people who are motivated by good working conditions with clearly defined roles. Systems are set up which are clear, repeatable and communicable to everyone on farm. Time is spent on staff training and creating a teamwork culture.

How to run a slick operation

Time management and rosters

Both farming operations described in this paper are relatively large with multiple herds and staff; however managing time is very important on any size dairy operation in New Zealand. Anyone that manages people must be able to manage their own time effectively and develop systems and procedures that will maximise efficiency from their team, and provide insurance that minimum crucial daily requirements are achieved at any given time of year. Systems and routines must be robust but also be able to adapt to the unexpected; this is important to meet farm goals and KPIs on time and within budget and to satisfy the requirements of the staff e.g., down time on rostered work days, time off, and salary. Weekly rosters drive a slick farm operation, setting them up according to seasonal demands is the key to success.

When setting rosters, staff buy-in can be achieved by allowing them to have a say in how time-off is structured; this matters not only for time off-farm but also their workload when on farm. When setting a weekly roster things to take into consideration are:

1. Minimum requirement of staff needed daily for the farm to function.
2. Minimum wages required for staff to meet legal requirements.
3. A 'Good Bugger' aspect such as sleep-ins, early finishes and non-milking days shared amongst staff.

For example, the roster cycle used for Whyduck Dairying incorporates a system of 12-on 2-off from 1st June to 30th September. Staff chose to have less time off during the winter when some annual leave is taken and during spring to lighten the workload by having more staff on

farm through the calving period. The cycle then changes to 7-on 3-off, 8-on 3-off from 1st Oct to 31st May, this allows more time off for personal activities during the traditional summer holiday period.

A whiteboard is used to illustrate the daily roster for that week, incorporating all main daily tasks (e.g., cows in, milking, sleep-ins) as well as rostered days off. Other items outside the routine daily tasks are also noted here, e.g., herd testing, discussion groups, AgITO. This system is an effective way of keeping staff informed of jobs which may disrupt the daily routine, or which may be perceived as undesirable (e.g., scrubbing the cow shed, covering the silage pit).

Outside of the spring period, breakfast times are staggered throughout the morning milking so that when milking is finished all staff have either had breakfast or had it prior to starting work. Care is taken to focus time on essential and critical tasks by eliminating jobs from the farm that have minimal consequences. For example, at times of the year where mastitis is not a big problem penicillin cows are milked once per day.

A casual staff member is employed four days per week to ensure that 'tidy up' jobs are done and to provide a back-up to deal with the unexpected, without disrupting the milking routine. This also drives efficiency with no delay getting to the job at hand because general maintenance is kept up and gear working properly.

Seasonal routines

Dairy farming systems in NZ are mostly seasonal operations that start 1st June. The season can be broken up into four parts in which daily requirements for the staff change. Planning and developing systems and routines for these times is crucial to efficiently manage staff.

Spring (late July to end September) (Appendix 1)

Spring is a complex time to manage, and therefore it is extremely important to have simple, repeatable systems in place to run an effective team. A high performing farm will feed cows well, doing so in a way that means it continues to feed well after the first grazing round,

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getting as many cows performing highly and able to achieve long lactation length, and do so in an efficient manner (i.e., low cost through effective pasture utilisation). Good robust systems are crucial at this time in order to maximise time spent monitoring and managing all the herds, to maximise stock health, to manage the spring rotation and supplement, and to avoid burn-out in staff.

On Willsden Farm, starting late July staff work approximately 60 hours per week in an 11-on 3-off roster cycle. A minimum of four staff are required on farm daily; several systems are employed to maximise the effectiveness of staff within a day. This includes all staff starting and taking breaks at the same time so they all work as a team, e.g., start time 5am, milking all necessary herds, checking springers, inductions and dry cows etc, all stopping for breakfast at the same time before feeding dry herds, and picking up calves. This way everybody can meet and plan at the same time, and down-time spent waiting for staff is avoided.

Temporary fences are employed to form laneways to breaks; this allows control of cows in and out of breaks and allows one person to easily handle a large number of stock by themselves. The practice of setting up a second break fence ahead of cows has benefits for controlling grazing residuals, minimising breakouts and also allows one person to shift stock.

Time spent on critical jobs helps to eliminate extra work. For example, extra time is spent during the spring period ensuring cows are supplemented correctly with magnesium to help minimise milk fever. For Whyduck Dairying, the casual staff member takes care of spreading magnesium, as well as feeding later-calving cows, feeding out supplement and machinery maintenance. This ensures that full-time staff can prioritise the monitoring of springers, treatment cows and milking. All health treatments and drafting are restricted to the morning milking, this way the afternoon milking can be kept simple and eliminates the rush effect of staff wanting to get home and not doing a job properly.

Summer (mid-October through March) (Appendix 2, 3)

During summer the focus on both farms shifts to managing irrigation as well as closely monitoring pasture to manage feed allocation and surplus. The time taken to shift irrigation and milk cows, while consistent, is largely inflexible; this can create pressure if not managed well. Robust systems built around the time needed for milking and irrigation shifting are able to accommodate industry training and down time for staff (e.g., sleep-ins, longer lunch periods) which allows some recuperation from the busy calving and mating periods.

The mating period can add pressure to routines with a large amount of time and concentration needed during heat detection. Whyduck Dairying utilises tail paints to assist with accuracy of heat detection. The tail paint colour is changed weekly during A.I. which allows for visual help with heat detection i.e., only looking for one colour each week (short return or a normal return) removing the need to look up the mating records.

Autumn (early March through to dry-off) (Appendix 4)

During the autumn irrigation requirements end for both farming operations and the focus shifts to monitoring cows to maintain production levels, repairs and maintenance and preparations for wintering. A proactive approach is taken to increasing cow condition so that body condition score targets are met prior to dry-off. Willsden Farm splits the herds into

1. Better condition cows, empty cows, culls and induction culls;
2. Lighter condition cows and induction cows.

Willsden Farm has also employed 3-in-2 milking system to increase cow condition going into winter. This, coupled with no irrigation, has the added advantage of allowing a decrease in staff required on any given day, allowing staff to take annual or extended leave to be taken without missing normal scheduled days off.

For Whyduck Dairying all staff are involved in winter planning, preparations for wintering and cow management jobs such as vaccinating for leptospirosis, drenching, and selection of cull cows, dry-off and tail trimming. To save time drafting in the spring all cows are tail painted into calving groups at the beginning of April to make drafting into winter calving groups easy; this has the added advantage of being able to detect autumn slips. The fifty lightest cows from each calving group are drafted at dry-off and wintered separately for preferential feeding; this group is the only one needing to be drafted back into calving groups in July.

Winter (June through to PSC) (Appendix 5, 6)

The focus during winter is to feed cows well to achieve target body condition score prior to calving. Where possible fences are set up a day ahead and feeding out is done in advance. Both operations spend time preparing for spring (e.g., sorting calf rearing equipment) so the farm is well prepared for calving.

Planning is put into how mobs are sorted prior to wintering so that large-scale one-off events run smoothly and are adequately staffed e.g., vaccination for rotavirus, teat sealing heifers and tagging heifers. For example, Willsden Farm splits cows into three mobs before dry-off:

1. Heifers/light cows/induction cows,
2. Early calving cows i.e., from planned start of calving to approximately 14th August,

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3. Late calving cows i.e., from 15th August to 30th September (finish).

Splitting the cows into these mobs ahead of time allows bringing them through the shed for vaccinating against rotavirus (Rotovac) to be timed appropriately: herd 1 does not need to come to the shed, herd 2 and 3 can be vaccinated up to 2 weeks apart to maximise the effect of the Rotovac on later calving cows. The early calving herd is also effectively the springer mob at the beginning of calving, with only that herd needing to be sorted depending on how many cows are required in the springer mob. In previous years the herds had been split on body condition to preferentially feed lighter cows; this meant all the cows had to come through the shed around the same time, and then be sorted again on calving date. Willsden have found the same body condition results can be achieved under the three mob system while reducing time spent drafting cows.

Knowing when these single events happen can be planned for and communicated to the team well in advance. Rosters can be set accordingly for the minimum staff requirement for these days, and a plan for that day can be set, e.g., the herd coming in should be fed supplement first and come in before they get their crop, maximising the time and allowing for unforeseen events.

Summary: The tricks of a slick operator

Operations management

- As a manager on a large operation it is important to observe what is going on rather than trying to do the job yourself. This includes not only the physical aspects of the farm but how teams and individuals are performing. This way you can identify problems with procedures or people early.
- You must change your mind-set from seeing a problem and fixing the problem yourself – to communicating to your staff to correct the problem. This way they will learn from their mistakes and hopefully stop it from happening again. Treat these events as training exercises; it is important you don't let these events suck you back into doing these jobs yourself.
- It is important to 'have a presence' on farm so that staff know you're available and you understand what is going on. You are only a phone call away.
- Try to be a fire warden rather than a fire man – take the matches away before someone gets burnt. Provide information to empower people.
- It is fine to spend twice as long doing a job if you are training someone, because by the time they have done the job for you twice they have paid you back the time spent.

- As a manager, don't become too involved in the cowshed; this can lead to disruption of the routine if you are called away to other jobs. For example, Jeremy chooses to personally only be in the morning milking roster and so is free for other jobs in the afternoon.

Cows and grass

- Identifying and spending more time on essential tasks is critical for eliminating problems/consequences down the track. For example, spending time on mastitis cows in the spring and taking time to screen cows prior to joining the milking herd saves time detecting and dealing with mastitis later on and results in higher production through lower BMSCC.
- Weekly farm walks are essential; having the wedge, grazing plan and paddock ranking enables quick and easy grazing decisions.
- Prior preparation and set up allows for smooth-running morning routines. For example, next morning's paddocks sorted the day before allows minimal staff requirement for early mornings.
- Avoid creating work outside regular hours. For example, clean up paddocks during the day time if shifting herds is required with fresh breaks offered at night to save shifting outside of normal work hours.
- Have a set time for complicated jobs which require attention to detail. For example, do all penicillin treatments at the morning milking all season, also any drafting of colostrum cows done in morning. This ensures a good job is done as staff are doing this task in work time and it doesn't affect their finish time.
- Eliminate jobs from the routine as they become less critical. For example, penicillin and lame cows are milked once a day after calf feeding is finished, eliminating a mob from afternoon milking.

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Appendices

Appendix 1: The general daily system employed during spring for Whyduck Dairying

- Springers checked 5am, 9am (collecting calves), 12pm, 5pm, and 10pm.
- Cows milked and milking cow breaks all done.
- Breakfast by 8am (some taken during milking to reduce down time).
- At 9am a team of sharemilker, herd manager and 2 others collect calves and put all springers through cowshed to draft off calved cows, and assist calf rearer in tubing all new heifer calves.
- Only require 2 people to take springers to shed and run through, frees up 2 staff to help with calves etc. Consistently takes 1-2 hours daily.
- Remaining 1-2 staff shift other dry cows still on winter block.
- While springers are at cowshed, casual is spreading magnesium and shifting their break and feeding out as required.
- Generally time from 11am – 12pm is filled with checking cows, cowshed maintenance, calving cows, feeding out, and setting up fences.
- Springers checked at 5pm to allow time if a calving is required while still daylight. This check is always done by the person doing the evening checks for consistency.
- The focus for this time of the season is on systems, same thing day in day out but very important. A point is made of having the best person for each job doing it every day, within reason as it is still important to train others for future years.

Appendix 2: Summer routine for Willsden farm

- Starting mid-October, staff work a 55 hour week, utilising an 11-on and 3-off roster, with a minimum 4 staff required on farm on a daily basis.
- Irrigation begins normally sometime in October. There can be 2 to 5 Roto-Rainers, and K-Line to be moved on any given day depending on when the centre pivot is running. This takes 3 to 5 man hours per day. Irrigation movements are planned once a week on how many machines are to be run.
- Mating starts 26th October. The manager and 2IC are required in the cow shed for the morning.
- Solid routines are setup around milking and irrigation because of the predictable nature of how long these activities take. For example, 2 staff start early (4am) to wash silos, get cows, and milk. Roto-Rainers are checked by the person getting cows to ensure they are finished

on time. A 3rd person starts at 6am to cycle people through breakfast breaks. A 4th person starts at 7.30am having had breakfast prior to work. All staff have finished their breaks before milking ends, and are therefore ready for the morning's work. This daily roster is set fortnightly by the staff so they get some input and variety.

Appendix 3: Summer routine for Whyduck Dairying

Staff work between 45 – 50 hours per week (depending on experience) utilising an 7 on 3 off, 8 on 3 off roster cycle, with a minimum of 3 staff required on farm on a daily basis post mating (however 4 staff allows sleep-ins every 2nd day).

- Irrigation begins end September/ early October, 5 pivots are easy to manage but still require good monitoring. Jeremy chooses to usually shift the 1 Roto-Rainer himself to avoid messing with the milking roster. It allows good structure if staff don't have to do much irrigation shifting.
- Mating starts 23rd Oct and either Jeremy, the herd manager or his 2IC are in shed each morning. The heat detection is split between two people usually doing half the milking each because 5 hours is a long time to concentrate.
- Milking is a solid system now and continues like this through to autumn
- Pasture recording is done weekly and all staff are well aware of residual targets.

Appendix 4: Autumn routine for Willsden Farm

Starting early March, staff work a 45 hour week utilising an 11-on and 3-off roster, with a minimum of three staff required on farm on a daily basis. Without irrigation running there is opportunity for staff to take extended or annual leave without missing their normal scheduled days off.

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Appendix 5: Winter routine for Willsden Farm:

Starting June staff work a 40 hour week utilising an 11-on and 3-off roster, with a minimum of 2 staff required daily.

- Cows are off farm, but managed and fed by farm staff
- Cows have been split into 3 mobs in May before dry off:
 1. Heifers/light cows/induction cows
 2. Early calving cows i.e., from planned start of calving to approximately 14th August,
 3. Late calving cows i.e., from 15th August to 30th September (finish).

Start time for staff is day break (7.30 am). The daily routine for 2-3 staff is:

- Feed out supplement to herds.
- Walk through cows to check for issues, e.g. slips, mastitis, other health issues.
- Allowing approximately 1 ½ hours for cows to eat before letting them onto crop, which involves taking down the break fence and setting it up for the next day.
- Approximately 5 hours is allowed for this routine which takes the staff through to lunch time and allows for contingencies.

Appendix 6: Winter routine for Whyduck Dairying

Staff work a 40 hour week utilising a 12-on and 2-off roster, during the weekends there is generally only 3-4 hours work per day for 2 people. All staff are expected to take a minimum of ten days annual leave during the winter. All fences and feeding out are completed by dairy staff on additional land owned and run as a cropping farm by Stewart Partnership Ltd.

Cows are split into calving groups in May with a lighter mob drafted off:

- Mob 1 – 1st 300 calving cows (including early inductions)
- Mob 2 – 2nd 300 calving cows
- Mob 3 – 3rd 300 calving cows
- Mob 4 – 4th 300 calving cows (including late inductions)
- Mob 5 – 220 skinniest cows from all calving groups including heifers
- Mob 6 – 280 heifers

General Day Structure for 1 tractor person and 2 fence shifters:

- Feeding out is done daily on kale 1 hour before kale breaks are shifted.
- Feeding out is done every Monday and Friday on the Greenfeed Oat paddocks. Feeding out is done ahead provided the weather is settled.
- Fence shifters work around doing each break and setting up again for the next day. While doing this, staff are to check water troughs, fence power, and for any off colour stock that

might be slow moving onto new break. Also monitor feed left behind and to report to manager if feed seems inadequate or the residual left behind is too high.

- During afternoon one staff member is to drive past each mob to check fence power and monitor feed levels.
- Jeremy aims to drive past each mob at least once on a daily basis just to check residuals and general wellbeing of stock.

Notes: