ACHIEVING SUSTAINABLE IMPROVEMENT

Enhancing services to dairy farmers through effective partnerships between public and private sectors

John Penry, Mark Paine and Pauline Brightling

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Your Levy at Work

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The efforts and innovation of the core partner development group led by Rod Dyson have shaped this body of research.

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For further information, please contact:
Harris Park Group, Level 2, Swann House, 22 William Street, Melbourne, VICTORIA 3000, Australia.
Ph 03 9620 7283 or e-mail info@harrisparkgroup.com.au

Designed by:
SUBStitution Pty Ltd, PO Box 351, North Melbourne, Victoria, 3051 AUSTRALIA

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Executive summary

In 2005 Countdown Downunder started designing a service to promote ongoing, incremental improvements in mastitis and milk quality. The original Countdown working group had enough resources and experience to develop the technical content of the new service but was struggling to find ways of improving engagement with farmers and advisers.

The research presented here, on Achieving Sustainable Improvement (ASI), was a collaborative effort between the Rural Innovation Research Group[1] and Countdown between 2006 and 2008. Its primary objective was to identify necessary design elements of a service offered through the private sector (veterinarians) to enable existing technology (Countdown industry information and resources) to be incorporated into routine risk management of farms. A partnership between private sector and industry would achieve sustainable improvement in farm performance through on-going refinement of technology by practitioners.

The new service, known as Countdown MAX, enables dairy farmers to focus on key decisions at a time and in a way that is appropriate to events occurring on the farm. A MAX process involves advisers working with the farm team to assess the situation, developing an agreed strategy, implementing it, then reviewing the results and re-planning the next set of actions. The final design of this service is very different to what was conceptualised by the original working group as a result of the ASI intervention and many lessons have emerged that were far from intuitive.

As predicted, offering a knowledge-based planning service required a change in mindset from the traditional culture of service provision of dairy veterinarians. Interestingly a major barrier to this stemmed not from the cost to farmers as originally suggested but from the concerns of service providers themselves that they were putting their reputation at risk and their clients might not get value for money. This is not unfounded given that implementation of agreed actions is outside an adviser's control – yet this situation is no different to advisory-based services in other professions. In the pilot advisers were asked to use a checklist to systematically reflect on the strengths and weaknesses of the farm's plan, then build in the appropriate checks and balances. Although this additional tier of self-assessment seemed a valuable exercise at the time, it has not been embraced by practitioners in the longer term.

Another hurdle that was larger than anticipated was having the service embraced by the whole veterinary practice and not just one person. To integrate MAX into their business, a practice needs to have an agreed business vision and organise the resources to achieve this objective – a process parallel to the one they are facilitating on farm.

Unless the service is accepted and valued by others in the business it cannot reach its market potential (as determined by farmer demand) and is destined to be a minor part of an individual's workload. Furthermore the expertise to deliver MAX needs to be transferred to others in the practice if the service is to be sustainable. Having an effective mentoring program is one way of achieving this as it enables the practice to evolve the service as a team and become much less dependent on the MAX 'champion'.

A major finding from ASI is the need to actively involve practitioners in the development of a service and its resources. The original rationale for involving farmers and service providers was to ensure the service was a good fit with the way they both thought and did business.

Findings

- The market is ready for MAX-type management services
- Dairy farmers valued Countdown MAX as it provided management cues for good udder health in 'real time'
- MAX practitioners need a broad skill-base, technical expertise and understanding of the farm system to add value to farm management
- Providing a solely knowledge-based service to dairy farmers (as opposed to a clinical procedure) was initially disconcerting for veterinarians involved in the pilot
- Ways of boosting the review step are needed to achieve ongoing, incremental improvement in herd performance
- Countdown MAX continues to be offered by individual practitioners but has not been fully integrated into any veterinary practice
- Ways of integrating MAX into provider businesses are needed if the service is to sustain in the private sector

Footnote:

1. At the University of Melbourne School of Land and Environment, formerly known as the Centre of Change Management.

However experience from the pilot shows this co-development is also necessary for engaging the interest of service providers and this applies at every level. For example, there was very limited extension of MAX to individuals and practices that weren't part of the core partner development group and only modules that were developed by the group as a whole were widely adopted by group members.

If the service is to be sustained in the private sector, farmers must believe it is giving them value, which can be assessed by their willingness to pay and the level of repeat business. Of the farms participating in the pilot most paid for the service (90%) and half (55%) did more than one module. This would be a glowing endorsement if it wasn't countered by the fact that only 38% of the Countdown MAX modules went through the review and re-planning phase of the process.

Having progress review as a weak step in the MAX process means critical opportunities are being missed to keep the MAX plans relevant; a situation that can only dilute farmers' perceived value of the benefits of the service in the longer term and ultimately undermine sustainable improvement. After all, dedicating time to discussing issues and progress, involving the right people in the discussion and basing it on objective information is the essence of the whole service. When the review step is done well it motivates ongoing engagement, planning and action. Without it decisions affecting mastitis and milk quality may not be framed within the context of the drivers of the farm business, and the importance of implementing the agreed actions and benefits of participating may be lost.

This first attempt by a project to embed its technology in a management service offered through the private sector has achieved mixed success. The farmers involved in the pilot of Countdown MAX enthusiastically supported the concept and were willing to pay for the service, and the vets were very confident they could identify opportunities to improve udder health management on farm.

The block to the service being more widely available seems more from the supply side.

Major outputs of this ASI research

- Confirmation of the potential of MAX-type services to improve herd performance
- Better alignment of services of participating veterinary businesses with Countdown messages
- Better understanding of what is stopping veterinary practices offering MAX on a larger scale
- Re-design of the Countdown Mastitis Focus for the wider industry good

Recommendations to the dairy industry

- Continue to invest in having a regional advisory capacity as a route to market for industry technologies
- Heavily involve practitioners (farmers and advisers) in the design of new products and services
- The MAX elements (ways of engaging, negotiating actions and reviewing) should be part of any service design
- Try different MAX models to the one presented here: such as partnering service providers with technical and whole farm system expertise; or embed the process in the design of adviser engagement strategies
- Develop technology in a way that continues to recognize that the overall management and responsibility of an individual farm system resides with dairy farmers

Advisory businesses as a whole need to believe the new service benefits both them and their clients, and commit the people, time and systems needed to support it. Furthermore the MAX practitioner needs to have a mature skill set that goes well beyond technical proficiency. For these reasons extension of the service to other practitioners and practices is unlikely to be automatic. Their interest is most likely to be engaged if they become involved in the development of the new service 'from the ground up'.

Nevertheless the MAX process is fundamentally sound and applicable to a significant proportion of dairy farms (15-25%). The need for this type of service will only increase over time, especially in the management of larger herds.

The background to this research

Extension experience within dairy regions over the past 40 years has clearly shown that increasing awareness of technical recommendations and providing training is not sufficient to sustain practice change on farms.

Dairy farming has become more complex over the last decade and there is an increasing need for good risk management in areas that critically affect the farm business: from feeding, fertility, mastitis control, pasture management and disease control to financial management. Forward planning is needed to run businesses effectively and manage exposure to increases in the variable costs, especially those associated with managing larger herds.

Recent research from a national extension program (Countdown Downunder) found that ongoing improvement on farms depends on more effective working relationships between farmers and service providers to enable regular review and adaptation to circumstances and priorities.[2] Following this finding Countdown was charged with the task of developing a new service that enables pro-active management of mastitis in dairy herds through regular cycles of planning and review. The elements of this service became known as Countdown MAX in the mid-stage of its development and pilot.

Achieving Sustainable Improvement (ASI) is social research commenting on processes for incorporating management planning in the suite of services offered by the advisory profession to farm businesses. The development of the Countdown MAX service and its integration into veterinary businesses provided the basis of the ASI study.

Identifying factors necessary for the success of such a service is of interest to industry programs aiming to have their extension recommendations achieving change on dairy farms. The dairy industry is well-placed for this development given the state of maturation of programs such as Countdown Downunder, Taking Stock, InCalf, Grains2Milk and Target 10. These projects have negotiated industry best practice within their domain and are exploring ways to embed this in the everyday practice of dairy farming.

Industry funding of the design and development of a service for use by the advisory profession can be regarded as a public-private partnership. The dairy industry, through its investment in the research reported here, is involving the private sector in the provision of technology traditionally provided through the public sector. The primary motive in this case was not to share cost or risk but the belief that an effective public-private partnership would help place industry interventions on a sustainable basis.

The premise is that the private sector will continue the investment by maintaining and improving delivery of new technology to farmers if it is a viable business proposition. Yet moulding industry tools and knowledge into a new service and establishing it as a recognised business interest is a development task in itself and one that has not been initiated by private practitioners in the dairy industry to any large extent to date.

ASI followed the emergence of Countdown MAX with particular interest in: (i) engaging private service providers to develop new services for their farmer clients, (ii) enabling service providers to engage farms in effective planning and management as a business proposition, (iii) developing on-farm planning procedures to anticipate and organise resources to make critical decisions, and (iv) creating repeated demand by linking performance reviews with the planning.

The measure of success of this development work from the ASI point of view is whether Countdown MAX becomes a viable business proposition (offered by service providers on a fee-for-service basis) and whether there is on-going demand for the service. Another major output of the ASI research is evaluation of a methodology for strengthening the participation of practitioners in the development of programs and services they are to deliver.

This report describes the development of Countdown MAX, what happened on farm, the integration of the new service into veterinary businesses and its implications for other projects.

Footnote:

2. Nettle R, Hope A, Thompson A, Smolenaars F, Brightling P. Insight to the dairy industry's capacity to manage mastitis. Research report to Dairy Australia, March 2006

The development of Countdown MAX

Countdown took on the challenge of developing a farm planning service for mastitis control in 2005. It was felt then that, to be classed as a MAX-type service, it must have advisory input, a written plan and multiple connects between the farm team and adviser to discuss progress.

None of the handful of management-related services offered by veterinarians had industry recommendations and resources at their core. This became the industry's contribution: to help organise the relevant Countdown information resources around decisions made on farm for service providers to use with their clients.

Interviews conducted in two veterinary practices to help scope the ASI research anticipated the challenges as: having advisers place more value on planning and reflection in their work routines (versus 'getting on with the job'); developing skill sets to help support people issues; and being able to present a value proposition that is both convincing and incorporates non-fiscal outcomes. Veterinarians like to get straight to the 'nuts and bolts' of a strategy. However, to support their client's decision-making, they need to pitch the technical advice so it fits the direction and issues faced by the farm business (and these are not always explicit).

Service providers and farmers are not often considered part of the technology development process - this is an oversight. People who put new knowledge, methods and technical devices into practice (the practitioners) have the capacity and motivation to adapt the technology to best suit their purpose.

Failure to involve these practitioners in the design and development of new services can compromise the adaptive capacity of rural industries to effectively establish new technologies on farms. Their understanding of the service, its goodness of fit with their business, and their confidence in practising it determines whether they continue to promote it in their client base.

Consequently ASI involved a number of organisations and disciplines in the co-development of Countdown MAX using a methodology referred to as Participatory Technology Development. This approach first appeared in Science in 1971 (Carroll, 1971[3]) and was later defined by Carroll as,

> *"…the inclusion of people in the social and technical processes of developing, implementing and regulating a technology, directly and through agents under their control, when the people included assert that their interests will be substantially affected by the technology and when they advance a claim to a legitimate and substantial participatory role in its development or redevelopment and implementation." - Carroll, 1973[4]*

The design and pilot of Countdown MAX was guided by a core partner development group involving five service providers (four dairy veterinarians and a farm management consultant), two dairy farmers, four representatives from industry projects (Countdown and InCalf) and two applied social researchers studying innovation practices from the University of Melbourne. The veterinarians in the group were short-listed from over 40 practices because of their familiarity with the Countdown resources; their interest in discussing a new service approach; the diversity of their client bases; and their availability and commitment to repeated trips to Melbourne.

The design brief for the group was to develop a service that engaged the interest of dairy farmers in a way that enabled the Countdown resources to be integrated into farm management and locked in repeat business. The elements of a new service that would support high-level consultations around udder health management were agreed in four two-day workshops held between January 2006 and February 2007.

The elements of a MAX service

- Advisory input in the planning stages
- A written plan
- Multiple connects between farm team and adviser to discuss progress on the plan
- Fee-for-service

Footnotes:

3. Carroll JD (1971). Participatory Technology, Science Vol 171:3972, pages 647-653.
4. Carroll JD (1973). Participatory Technology, In Western Man and Environmental Ethics. Editor IG Barbour, Reading, Massachusetts, Addison-Wesley Publishing Company, pages 204 - 224.

Benefits of implementing Countdown MAX identified by the core partner development group

Good risk management

The concept of risk control is increasingly important as herd sizes grow, farms employ more staff and the management of the farm business gets more complex. Forward planning is needed to run these businesses effectively and manage their exposure to increases in variable costs.

Increased return on the farm investment

Most farmers and advisers regard the financial benefits of better mastitis control in terms of increased milk payment (through incentives paid by Australian dairy processing companies for premium quality milk) and reduced clinical mastitis costs (each case costing farm businesses about $230). Other significant but less overt monetary gains are also made through increases in the milk production, reduced labour costs and fewer cows having to be culled from mastitis.

Making life easier

Gains from having better control within the farm system (by establishing farm routines, simplifying tasks and providing a sense of progress) include less stress in the workplace, reduced staff turnover and increased satisfaction in 'a job well done'. Better clinical case management is an obvious example as it reduces the workload, management complexity and anxiety in systems where managers and workers are already time poor. Herds with higher clinical case rates often experience high levels of staff turnover in the milking team.

One of the first decisions to be made by the group was whether farmers and service providers would be interested in this type of service. Opening comments made by group members at the first workshop helped context the challenge:

> *"It's something we've been trying to do for years…we've done it with varying degrees of success, I'm hoping to get other ideas." – veterinarian in the core partner development group*

> *"I know how much better the farm can run when I stay focussed… it's one of the greatest challenges in running our farm." – dairy farmer in the core partner development group*

> *"In a busy practice it's hard to find the time and energy to try new things." – veterinarian in the core partner development group*

It was clear at the outset that managers must have a real and definable sense of what the advantages are for the farm business if they were to even consider trying the service.

The core partner development group had a wide-ranging discussion about the benefits of becoming involved in a management service that improves milk quality and reduces the level of mastitis in herds. They had little doubt that farmers would benefit (see box). The issues seemed to be more around estimating the size of the benefit for individual herds and presenting the benefits in a way that would engage farmers' interest to an extent where they would actually pay for the service.

That the service would economically benefit farmers was regarded as a 'hygiene factor'[5] by the principal social researcher. These factors do not guarantee change - but no change will occur if they are absent. Hygiene factors contrast with motivating factors like pride in the health and appearance of the herd, job satisfaction or the fulfilment derived from effective mentoring of others to perform new tasks. A combination of hygiene and motivating factors need to be present for change to occur. In other words farmers ***must*** receive an increase in the return on their investment if the service is to be sustained in the private sector but this alone would not guarantee its success.

The core partner development group designed the service to enable more targeted action at windows of opportunity where most impact could be made on mastitis and milk quality. Consequently three modules were developed: at Drying-off, Calving and Lactation.

An action research approach[6] was used in that the group critically reviewed a position outlined by Countdown at the beginning of each meeting, re-worked ideas to fit their professional (and life) experience and reached agreement on key elements of the service. These ideas were then converted into prototype "modules" by Countdown for piloting by group members with clients. After field testing their collective experiences with the modules were debriefed and the design refined.

An example of this was a short series of open-questions formed by Countdown to explore a farm's primary objective at drying-off. Asking the farmer whether they were intending to 'milk through or not' was thought to be a good way of opening the discussion. Further questions could then be asked to explore factors and attitudes underpinning the approach, such as: did they want (or need) to take a break, did the decision depend on the winter milk price, had their bulk milk cell count been creeping up, how certain were they about the due calving dates, were there major jobs scheduled to happen on the farm? This design (shown on page 7) was put forward to the core partner development group but it was too disparate from the current style of service provision for them to be comfortable using it.

Footnotes:

5. Herzberg F (1964), "The Motivation-Hygiene Concept and Problems of Manpower", Personnel Administration, pages 3-7.
6. Action research involves researchers as change agents - planning action on the basis of reflection, implementing these plans, observing the process systematically, and using this evaluation as a basis for further planning and action

The group then decided Countdown MAX needed to include processes for:

- **engaging the client**: owners and managers will only try the new service if they think it will benefit the farm business;
- **developing an agreed strategy**: knowing the farm team, their circumstances and being able to cut down quickly on to factors that will trigger change;
- **implementing** the planned actions and tracking progress; and
- **repeated cycles of review** and re-planning to achieve ongoing improvement.

This became the framework for building each of the Countdown MAX modules.

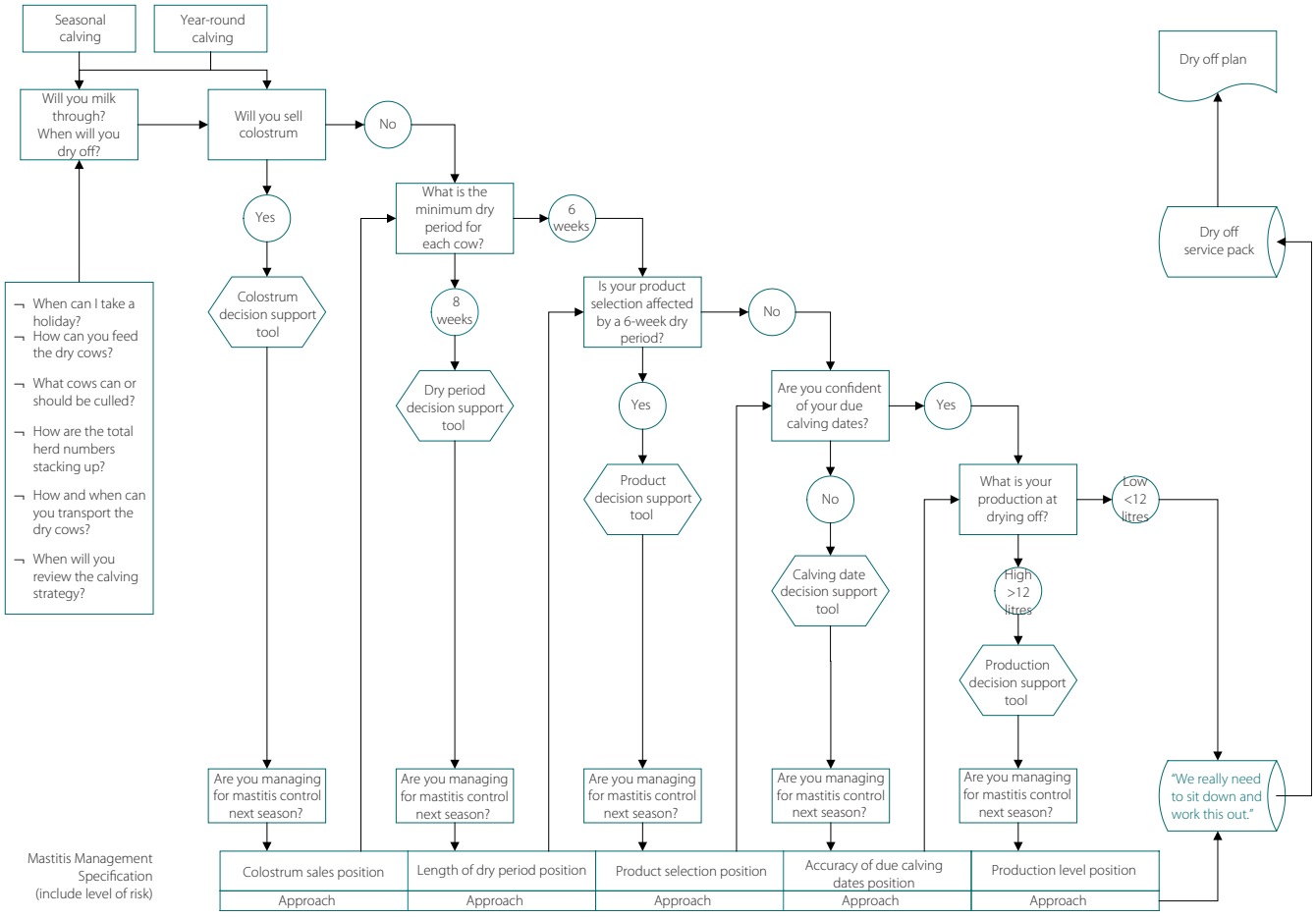
Group members chose the lines of enquiry followed to gain insight into the engagement, planning and review stages of the service during the workshops. As an example, when more information around the principles of market segmentation and client engagement was sought, the expertise of a marketing consultant[7] was contracted. It was at this meeting that the "finders, minders, grinders" concept of service provision was first aired (described in more detail on page 20).

Negotiating with farmers to build workable plans that move the farm system towards best practice requires considerable skill. It became evident during the pilot that the minimum technical requirement of veterinarians using Countdown MAX is high by current industry standards. Completion of a Countdown Downunder Adviser Short Course is essential but not sufficient to equip an adviser. "***Being able to wear the farmer's shoes***" (in the words of one of the development team) and translate the available information into a plan of action to deal with the specific needs of each farming system and managers' preferences requires a mature skill set (described in more detail on page 12). These skills can be acquired by veterinary graduates but are not a common aspect of mentoring programmes that currently operate in many practices which tend to be more *ad hoc* according to the perceived needs of an individual.

Footnote:

7. Geoff Everist Consulting Pty Ltd, Arcadia, Victoria 3631.

First design of the engagement steps of the drying-off module by Countdown



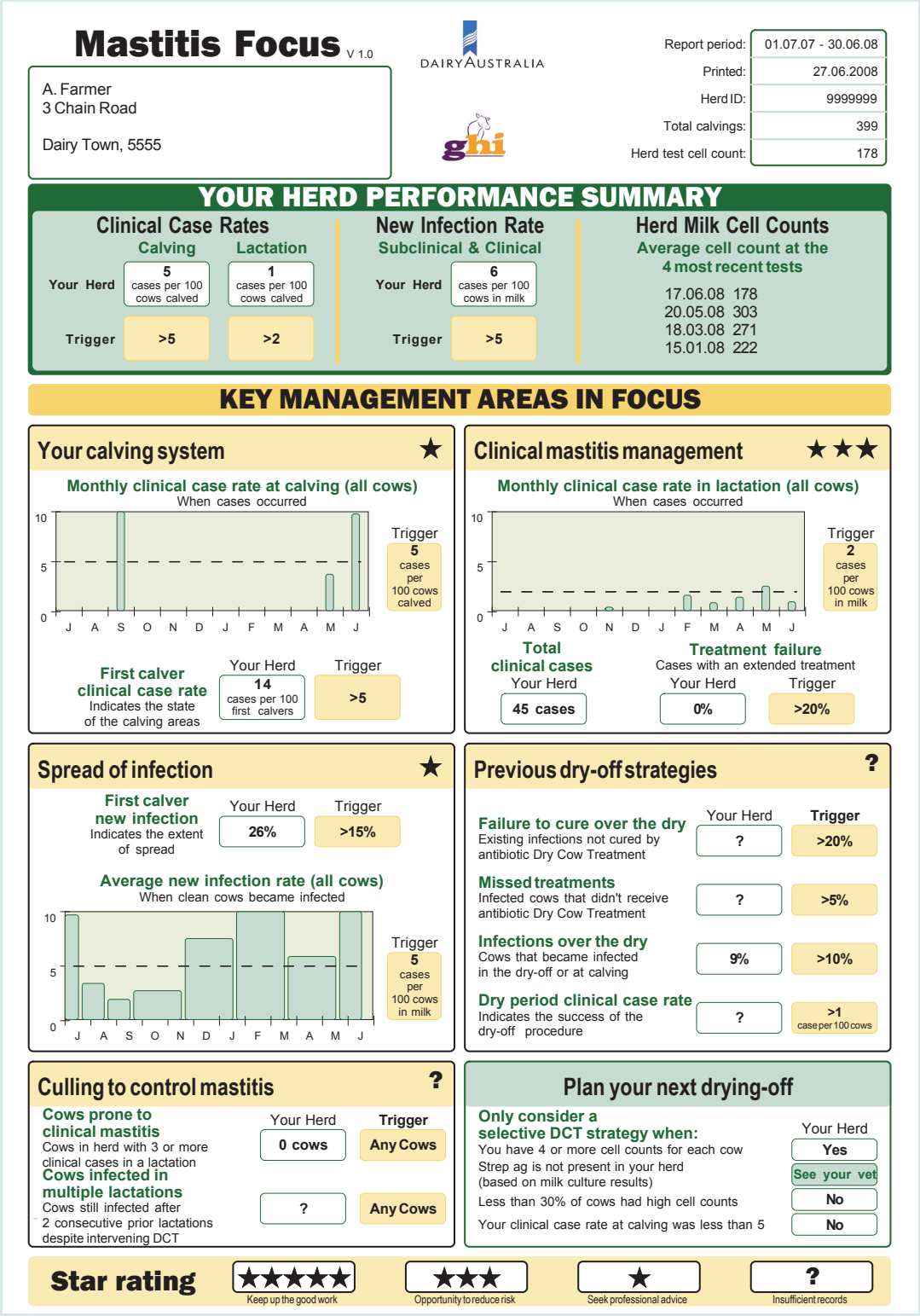
Whether or not it was possible to compress this experience in part through the use of a consistent delivery approach became a design consideration for the pilot. To this end supporting resources were developed for each module that prompted technical lines of enquiry in a logical framework that was comprehensive without being prescriptive. This included a checklist to help identify gaps between current and best practice and a one-page report form. The checklist was based on best practice described in the ***Countdown Farm Guidelines for Mastitis Control*** and ***Countdown Technotes***.

The emphasis of the service delivery needed to be on outcomes. While this states the obvious, existing farm services tend to describe their approach and activities rather than what they achieve for the farm business. This often conveys more complexity and demands on the farmer which can be off-putting.

Being able to measure the outcomes is equally important. Setting targets for the plans proved relatively straightforward but checking progress against these targets became a limiting step (refer to the discussion of the review process on page 17). At the beginning of the ASI research, Countdown was in the latter stages of developing a tool for measuring the udder health status of individual farms known as Countdown Mastitis Focus. As a result of core partner development group discussions, the Mastitis Focus report underwent a significant re-design in 2006 to align with the key management areas of the Countdown MAX modules and the way service providers and farmers were thinking about performance indicators in each area (see box). This is a good example of action research resulting in real time improvement.

Countdown Mastitis Focus was modified in 2006 to better fit the 'way of thinking' of service providers and farmers

The Countdown Mastitis Focus report provides objective information on a herd's mastitis status and helps alert to management areas that need attention. Availability of the report has been a bonus for Countdown MAX, enabling more robust initial assessments and regular reviews as advisers no longer have to manually analyse data and can readily review a herd's performance.



Notes (1) About half of Australian dairy herds are enrolled in milk recording and can therefore assess how quickly mastitis is spreading in their herds. (2) Although all herds keep records of clinical mastitis as a requirement of dairy processing company quality assurance systems only a minority of these are in an electronic format necessary for the generation of a Mastitis Focus report.

What happened with Countdown MAX on farm (the pilot)

Initially the veterinary businesses involved in the pilot estimated one-third of their client base would be 'market ready' for MAX-type services, one-third could be made ready with a little effort and one-third would never use this service. In more detailed in-house business planning discussions, most practices felt MAX was a good fit with 15-25% of existing clients.

To assess the robustness of the new service, ASI set itself the task of following MAX through five different service providers each servicing five farms. The participating farm businesses differed in the way they used their veterinarian and other advisory support, their preferred sources of technical information and the points of entry to Countdown MAX.

The target was exceeded. Over the past two years the research team followed Countdown MAX being delivered by eight veterinary businesses in part or in full to 55 farms, with herds of 140-1100 cows (averaging 376 cows) in Victoria and South Australia.

Overall 88 Countdown MAX consultations were conducted. Half the farms (55%) did more than one module and progress was reviewed for 38% of plans (see table).

Twelve farmers were interviewed early in the pilot in mid-2006 to obtain their perspective on the benefits and ease of implementation of the service. Although the service did not carry the MAX name at the time of interviews, they universally regarded it as a good experience and valued working through issues with an experienced and proficient adviser.

Aspects of the process that rated a special mention included the value of having a more structured process; the time spent sitting down and discussing the herd records; running through their current strategies and listening to the veterinary perspective ("***it's good to get their input because they see a lot of different systems and it didn't take too long***"); and the idea of using triggers.

The steps in each Countdown MAX module involved engaging the client, developing an agreed strategy, implementing the planned actions and tracking progress, and review and re-planning. Experience from the pilot for each of these steps is described in the rest of this section.

Countdown MAX consultations from 2006-2008

Vet practice	Number of farms	Number of MAX modules	Proportion of farms doing more than one module	Proportion of MAX modules reviewed
A	4	4	0%	50%
B	9	16	78%	31%
C	7	12	71%	58%
D	14	24	71%	25%
E*	5	5	0%	0%
F	4	11	100%	82%
G*	8	12	50%	33%
H*	4	4	0%	0%
TOTAL	55 farms	88 modules	55%	38%

**Practices marked with an asterisk joined the pilot later*

Engaging with the new service

Reasons for engaging with Countdown MAX continued to emerge throughout the pilot. As expected the promise of financial gains alone did not initiate (or sustain) interest in the service. The main points of entry initially were the vets approaching clients with whom they had a good relationship or as a natural next step following a mastitis investigation to "***make sure the problem areas do not return***". Having ways of preventing high bulk milk cell counts and outbreaks of clinical mastitis was especially important to those who had experienced problems in the past.

Early successes encouraged further engagement with other modules during consultation. Some advisers who started offering Countdown MAX then went on to recruit new clients by word-of-mouth without this being a deliberate strategy of their business.

Using MAX to help manage risk and increase profitability ("George farm")

The George farm is a large family-owned dairy milking about 1100 cows run by the owners and a herd manager. The owners have a separate off-farm business and a well-developed understanding of the benefits of managing risk and getting their strategies right.

The farm employs a small team of advisers to assist them including a consultant on mastitis management. They have now used all three of the Countdown MAX modules to maintain their milk quality.

The owners calculated that they have saved about $50,000 compared to a previous season by reducing the number of clinical cases at calving. Yet they see one of the main benefits of this exercise as the increase in staff morale - not having to cope with the stress of treating a lot of cows during milking each day.

Furthermore, with the herd producing about 7 million litres per year, their annual income could increase by $70,000 if they are able to keep the milk supply in premium band for the full season. Risk management and planning for good mastitis control are helping protect the bottom line of the business.

Putting the effort where it counts ("John")

John rang his vet for help with a bulk milk cell count problem. They spent half an hour on the phone discussing the herd's situation. The vet realised that the farm participated in a local herd testing service that would load his herd's clinical case data. They agreed to arrange this and obtain a Countdown Mastitis Focus report as a good way of "fleshing out the history of the herd".

John gave the herd test centre clinical case information for the last 14 months. His vet then generated the report. The report showed an increased rate of clinical cases at calving over four months of the calving period which had not been mentioned during the initial history taking session. This altered the direction of the investigation before any time was spent on the farm.

The focus was expanded from assessing milking practices and plant to planning for the calving period that was looming in a few months time. This additional risk assessment was integral to resolving the infection and cell count issues in John's herd.

Developing an agreed strategy

Developing an agreed plan of action for a Countdown MAX module involves understanding the farm's situation (business goals and people resources), assessing the udder health status of the herd and working-up a set of do-able actions that will achieve the desired endpoint.

The initial assessment and strategy development normally took place on the one farm visit. Typically the vet called the farmer and confirmed a date for a fairly lengthy discussion over 1-3 hours at the farm. Both parties found dedicating this time to the discussion worthwhile:

> *"I suppose we were a little doubtful as to what we could get out of it…I read all the literature and took a fair bit on board but once the vet came out and sat down with us the first time, it was all very positive …. we had perhaps overlooked [things] that we might have thought were minor but in the end worked out to be probably more important. And we had major improvements from using this approach." – dairy farmer involved in the early stages of the pilot*

> *"I learnt a lot about the farm that I had not previously known even though I thought I had a good relationship with them." – veterinarian from Practice G*

Knowledge of what is ***actually*** happening in the farm system and objective measures of performance lay the foundation for a richer discussion and consideration of options.

Experience from the pilot shows that involving the right people in the discussions from the beginning and having the process guided skilfully by the consultant were necessary for arriving at a robust strategy. This includes involving the person or persons who intimately know the system, collect performance data and have the authority to make changes.

Bulk milk cell counts, clinical mastitis records and milk recording data were collated and interpreted where practical to enable a comprehensive overview of the udder health status of the herd. "John's" story highlights the value of having objective information when prioritising actions (on page 11).

The way farmers think through the location of troughs and select and manage calving paddocks is driven by a well-developed sense of logistics on the farm. **Introducing a veterinary science perspective to these same decisions enables more rigorous planning that builds off both sets of knowledge but requires negotiation between the parties on what is most appropriate.** To facilitate this effectively advisers needed to employ the mature skill set mentioned previously so as to:

- think conceptually yet talk in practical terms - especially in terms of numbers, dollars, people and needs;
- facilitate discussions between people of different 'power' bases within the farm business;
- recognise, verbalise (where necessary) and address issues that may influence success; and
- create a process, including cycles of communication, that is not burdensome for the business.

Use of module resources by service providers

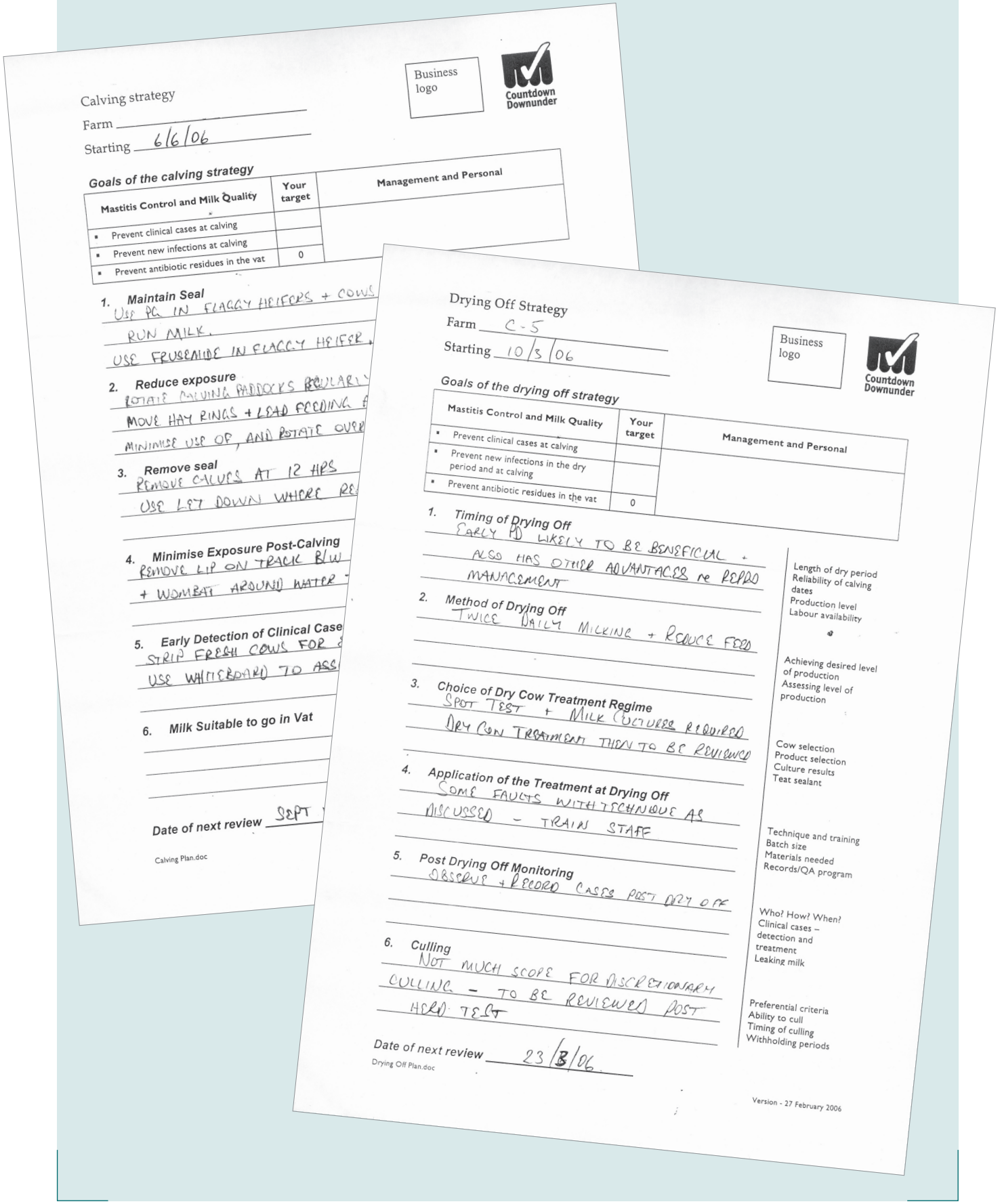
Countdown MAX at …	Number of modules	MAX checklist used to develop strategy	MAX template used for written report	Consult included re-planning	Invoice sent
Drying-off	43	61%	69%	40%	88%
Calving	36	83%	65%	36%	94%
Lactation	9*	44%	33%	33%	78%
TOTAL	88**	68%	64%	38%	90%

** The lactation module was only used by the two practitioners involved in its development*

*** Practice A did not use the checklists nor send invoices to any clients*

Example of an agreed strategy for Countdown MAX at drying-off

The report is on a single page to focus on core activities and for easy circulation to farm staff, it consists of a simple task list and a date for review is marked on the top of the page to keep it 'front of mind' alongside the baseline measure of performance.



Calving strategy

Farm

Starting 6/6/06

Business logo

Countdown Downunder

Goals of the calving strategy

Mastitis Control and Milk Quality	Your target	Management and Personal
▪ Prevent clinical cases at calving		
▪ Prevent new infections at calving		
▪ Prevent antibiotic residues in the vat	0	

1. **Maintain Seal**
   USE PG IN FLAGGY HEIFERS + COWS
   RUN MILK.
   USE FRUSENIDE IN FLAGGY HEIFER
2. **Reduce exposure**
   ROTATE CALVING PADDOCKS REGULARLY
   MOVE HAY RINGS + LEAD FEEDING
   MINIMISE USE OF, AND ROTATE OVER
3. **Remove seal**
   REMOVE CALVES AT 12 HRS
   USE LET DOWN WHERE RE
4. **Minimise Exposure Post-Calving**
   REMOVE LIP ON TRACK B/W
   + WOMBAT AROUND WATER
5. **Early Detection of Clinical Case**
   STRIP FRESH COWS FOR
   USE WHITEBOARD TO ASS
6. **Milk Suitable to go in Vat**

Date of next review SEPT

Calving Plan.doc

Drying Off Strategy

Farm C-5

Starting 10/3/06

Business logo

Countdown Downunder

Goals of the drying off strategy

Mastitis Control and Milk Quality	Your target	Management and Personal
▪ Prevent clinical cases at calving		
▪ Prevent new infections in the dry period and at calving		
▪ Prevent antibiotic residues in the vat	0	

1. **Timing of Drying Off**
   EARLY DO LIKELY TO BE BENEFICIAL +
   ALSO HAS OTHER ADVANTAGES re REPRO MANAGEMENT
2. **Method of Drying Off**
   TWICE DAILY MILKING + REDUCE FEED
3. **Choice of Dry Cow Treatment Regime**
   SPOT TEST + MILK CULTURES REQUIRED
   DRY COW TREATMENT THEN TO BE REVIEWED
4. **Application of the Treatment at Drying Off**
   SOME FAULTS WITH TECHNIQUE AS DISCUSSED - TRAIN STAFF
5. **Post Drying Off Monitoring**
   OBSERVE + RECORD CASES POST DRY OFF
6. **Culling**
   NOT MUCH SCOPE FOR DISCRETIONARY CULLING - TO BE REVIEWED POST HERD TEST

Length of dry period
Reliability of calving dates
Production level
Labour availability

Achieving desired level of production
Assessing level of production

Cow selection
Product selection
Culture results
Teat sealant

Technique and training
Batch size
Materials needed
Records/QA program

Who? How? When?
Clinical cases – detection and treatment
Leaking milk

Preferential criteria
Ability to cull
Timing of culling
Withholding periods

Date of next review 23/8/06

Drying Off Plan.doc

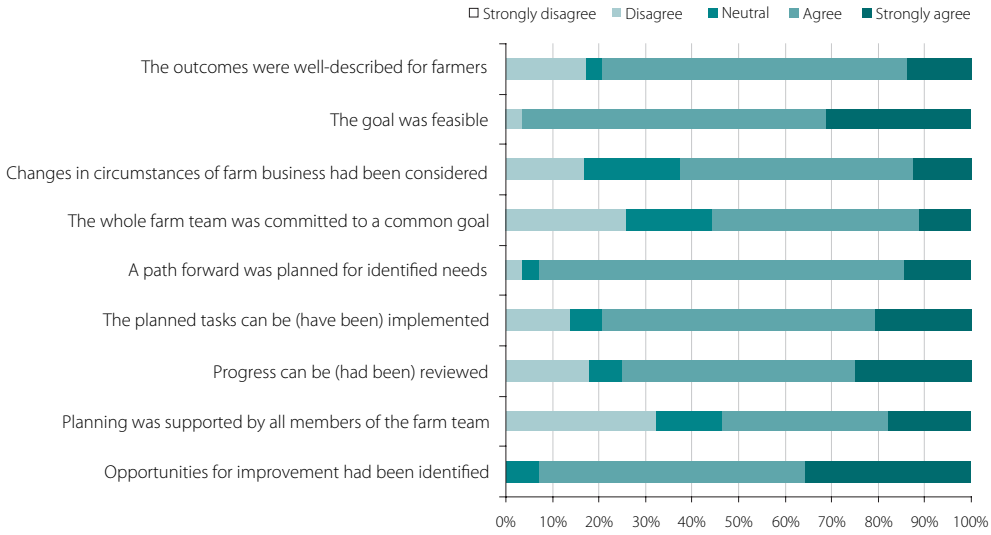
Version - 27 February 2006

All vets in the pilot kept notes of the planning discussions and gave their clients a written copy of the agreed plan. MAX checklists and the one-page report template were used about two-thirds of the time (68% and 64% respectively as shown in the table) but not always at the same time or by the same practitioner. Although the templates and checklists helped practitioners move towards a more proactive service model, they were not regarded as 'MAX' ***per se*** (as described in "Martin").

In the early stages of the pilot a checklist was designed to help the service providers reflect on the strengths and weaknesses of the final farm plans and their likely success. The questions in this self-assessment were derived from the stalling points preventing sustained progress on farms[8] and were intended to help the advisers set realistic expectations and build in appropriate checks and balances (see the example on the next page). ASI asked that all advisers participating in the pilot in 2006 use these sheets for at least five clients. Twenty-nine checklists were completed giving insight into how advisers felt about the plans.

Most advisers felt that the plans had identified opportunities for improvement although their confidence that this would translate to change on farm was strongly influenced by the level of complexity of the planned actions and the track-record of the farm management team (see graph).

The self-assessment also "***exposed a lot of holes***" and a common reflection of the advisers was the need to reconnect soon with farmers. Other strategies formed to improve the likelihood of success were including the owner in the next discussion, regularly assessing the skills of new staff, setting-up a back-up calving area and purchasing computer software. Yet no one continued using it after they reached their quota and it has been dropped from the Countdown MAX toolkit.



Adviser appraisal of the likely success of plans agreed for 29 Countdown MAX modules

Mastering the process ("Martin")

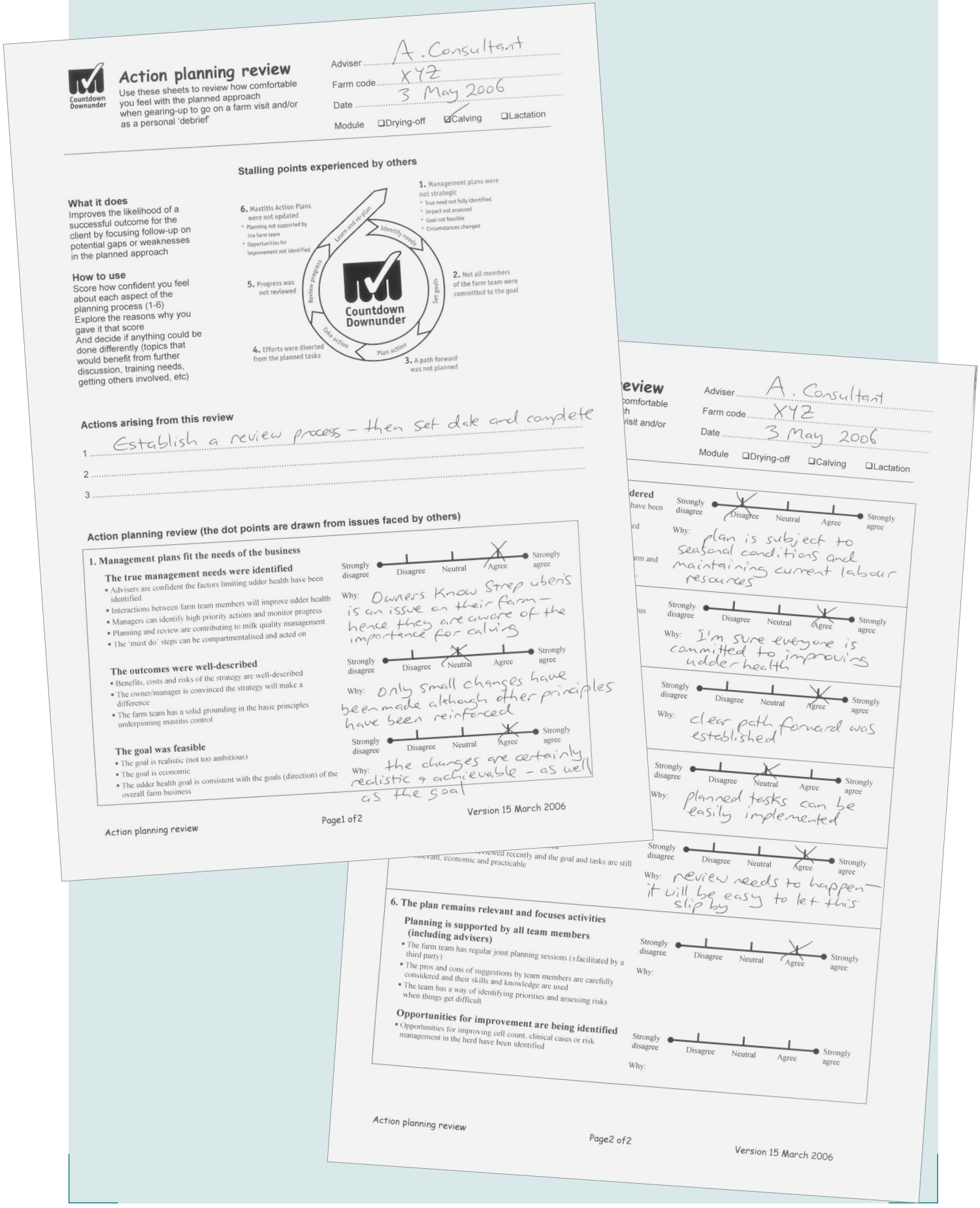
Martin is a veterinarian who was part of the development and pilot of the Countdown MAX modules. He spends most of his time on clinical work and has an interest in helping farmers achieve good mastitis control. Initially Martin used the Countdown MAX checklist during the consultation to make sure that nothing was missed, although he did not like the layout. Now that he is familiar with its contents, he uses it when he wants to reinforce the value of on-going planning with his client.

Whilst Martin has adopted the MAX approach he now uses few of its "consumables". He recognises that it takes skill and practice to use MAX successfully, not just the mastery of checklists. He describes MAX to his clients in terms of risk management - a way of reviewing decisions and outcomes.

Footnotes:

8. Nettle R, Hope A, Thompson A, Smolenaars F, Brightling P. Insight to the dairy industry's capacity to manage mastitis. Research report to Dairy Australia, March 2006

Self-evaluation used by practitioners early in the pilot to check plans were do-able



Countdown Downunder

Action planning review

Use these sheets to review how comfortable you feel with the planned approach when gearing-up to go on a farm visit and/or as a personal 'debrief'

Adviser ..... A. Consultant
Farm code ..... XYZ
Date ..... 3 May 2006
Module ☐Drying-off ☑Calving ☐Lactation

What it does
Improves the likelihood of a successful outcome for the client by focusing follow-up on potential gaps or weaknesses in the planned approach

How to use
Score how confident you feel about each aspect of the planning process (1-6)
Explore the reasons why you gave it that score
And decide if anything could be done differently (topics that would benefit from further discussion, training needs, getting others involved, etc)

Stalling points experienced by others

1. Management plans were not strategic
   - True need not fully identified
   - Impact not assessed
   - Goal not feasible
   - Circumstances changed
2. Not all members of the farm team were committed to the goal
3. A path forward was not planned
4. Efforts were diverted from the planned tasks
5. Progress was not reviewed
6. Mastitis Action Plans were not updated
   - Planning not supported by the farm team
   - Opportunities for improvement not identified

Identify needs · Set goals · Plan action · Take action · Review progress · Learn and re-plan · Countdown Downunder

Actions arising from this review

1 Establish a review process – then set date and complete
2
3

Action planning review (the dot points are drawn from issues faced by others)

1. Management plans fit the needs of the business

The true management needs were identified
- Advisers are confident the factors limiting udder health have been identified
- Interactions between farm team members will improve udder health
- Managers can identify high priority actions and monitor progress
- Planning and review are contributing to milk quality management
- The 'must do' steps can be compartmentalised and acted on

Strongly disagree · Disagree · Neutral · Agree · Strongly agree (Agree)
Why: Owners know Strep uberis is an issue on their farm – hence they are aware of the importance for calving

The outcomes were well-described
- Benefits, costs and risks of the strategy are well-described
- The owner/manager is convinced the strategy will make a difference
- The farm team has a solid grounding in the basic principles underpinning mastitis control

Strongly disagree · Disagree · Neutral (Agree) · Strongly agree
Why: only small changes have been made although other principles have been reinforced

The goal was feasible
- The goal is realistic (not too ambitious)
- The goal is economic
- The udder health goal is consistent with the goals (direction) of the overall farm business

Strongly disagree · Disagree · Neutral · Agree (Strongly agree)
Why: the changes are certainly realistic & achievable – as well as the goal

Action planning review · Page1 of2 · Version 15 March 2006

eview
comfortable
h
visit and/or

Adviser ..... A. Consultant
Farm code ..... XYZ
Date ..... 3 May 2006
Module ☐Drying-off ☐Calving ☐Lactation

dered
have been
ed
rm and
us

Strongly disagree · Disagree (Agree) · Neutral · Strongly agree
Why: plan is subject to seasonal conditions and maintaining current labour resources

Strongly disagree · Disagree · Neutral (Agree) · Strongly agree
Why: I'm sure everyone is committed to improving udder health

Strongly disagree · Disagree · Neutral (Agree) · Strongly agree
Why: clear path forward was established

Strongly disagree · Disagree (Neutral) · Agree · Strongly agree
Why: planned tasks can be easily implemented

reviewed recently and the goal and tasks are still
relevant, economic and practicable

Strongly disagree · Disagree · Neutral (Agree) · Strongly agree
Why: review needs to happen – it will be easy to let this slip by

6. The plan remains relevant and focuses activities

Planning is supported by all team members (including advisers)
- The farm team has regular joint planning sessions (±facilitated by a third party)
- The pros and cons of suggestions by team members are carefully considered and their skills and knowledge are used
- The team has a way of identifying priorities and assessing risks when things get difficult

Strongly disagree · Disagree · Neutral (Agree) · Strongly agree
Why:

Opportunities for improvement are being identified
- Opportunities for improving cell count, clinical cases or risk management in the herd have been identified

Strongly disagree · Disagree · Neutral · Agree · Strongly agree
Why:

Action planning review · Page2 of2 · Version 15 March 2006

Implementing the planned actions and tracking progress

Farmers generally regarded the main actions of their plan as being easy to implement although comments were sometimes made on the cost or "***the bit of extra work involved***". Some farmers fine-tuned their systems without having to make substantial changes, taking "***fewer shortcuts***",

> *"There wasn't a lot more work involved in what we were doing, it was just doing things differently… we took on everything that we could practically do without huge costs or huge increases in labour and got really good results from it. So certainly it made that little bit of extra work or mucking around well worthwhile." – dairy farmer interviewed in the early stages of the pilot*

Implementing the plan was comparatively straightforward on farms where one or two people worked. Gaining commitment of all members of the farm team to the plan was necessary in larger herds. Unless farm staff are conversant with the broad aims of the planned actions and how it relates to them, the chance of success will be lessened regardless of the strength of the plan. This can be achieved by explaining the reasons for making the changes to the wider farm team, being explicit about the roles and responsibilities of individuals, improving the skill level of farm workers where necessary and helping schedule the planned tasks. Some managers were quick to capitalise on training opportunities as part of the service delivery and had engaged the veterinary business to develop the skills of their staff.

Notably few of the 12 farmers interviewed in the first year were able to recall the specific tasks they had committed to without prompting – reinforcing again the need for regular contact to promote follow-through of tasks or accommodate unanticipated events..

Review and re-planning

One of the difficulties for farmers is "***how to get back to things that aren't top priority***" given the time pressures and many demands competing for their attention. Only 38% of modules were reviewed in the pilot – which is regarded by the ASI team as an unresolved development issue given that this is the critical step in maintaining the momentum and re-engaging interest in the planning process.

The style of review activities varied a lot between practices and none of them achieved a streamlined process. The informal nature of many connects meant that significant farm circumstances often missed being communicated or new issues were discussed outside the context of the plan when the veterinarian was at the property attending to other concerns.

Getting the most out of the progress review requires service providers to take the initiative in contacting the clients and keeping track of what's happening on farm. This is not a difficult task but it does require being organised, dedicating time to this step of the process and having others in the practice delegated to provide support where necessary (described in more detail in the next section). A change of behaviour is needed on both sides of the relationship:

> *"The review is often in response to renewed issues like an increase in the bulk milk cell count. Once [the farmer has] believed it has succeeded, they postpone the review." – veterinarian from Practice A*

> *"As a result of MAX it's now more of a habit to make the phone call right away. It's become more obvious how many opportunities are being lost." – veterinarian from Practice C*

The intrinsic challenge for service providers in this step is how to move through the content to make the review enlightening given that there is a lot of 'noise' around the progress that is made and many things are in other people's control.

Risk management driving the review process ("Ringo")

Ringo's herd had recently investigated an outbreak of clinical mastitis at calving. The large number of clinical cases at calving put his management system and his (and his wife's) enjoyment of work under considerable strain. He wanted to take steps to ensure that this situation ***"never happened again"***.

Ringo continued to work with his vet after the issues that had been contributing to new infections were resolved as he wanted the herd to be at low risk of mastitis throughout the year.

Over nine months the farm had completed MAX modules for calving (as part of the problem resolution), lactation and subsequently drying-off, using the Countdown Mastitis Focus report to regularly assess progress and risks.

Undoubtedly it is Ringo's commitment to reducing the risk of new infections that has been driving the changes in the farm system through the review and re-planning process.

Recommendations for getting good outcomes from the review and stimulating on-going planning

- **Forecast the review process**. Reviews are more likely to occur if they are regarded as part of the package from the first visit onwards. Farmers need to expect and schedule a review date preferably at the initial planning meeting.
- **Time the review** to be sufficiently distant from implementing the actions to enable them to take effect, but not so distant that the specifics have been forgotten. About 3-4 months after planning sessions for the drying-off or calving modules seemed optimal for many herds.
- **Use objective measures** to enable richer, more focused discussion.
  - → Collect the necessary farm data well before the review date, allowing the adviser adequate time to analyse the data and prepare for the session. For Countdown MAX this includes capturing clinical mastitis data that has not been committed to an electronic format or transferred into the herd test centre database. The advent of Countdown Mastitis Focus makes it much easier to establish the udder health status of herds, mitigating many of the difficulties encountered in the first 18 months of the pilot. It also enables analysis of key management areas in a way that was not previously possible. Note that some skill and effort may be required on behalf of the adviser to gain on-going commitment to the necessary data capture on farm.
  - → Express changes in terms of financial and workplace benefits (less stress, greater control) where possible.
- **Describe progress** that has been made and the benefits of continuing. Reinforce the goals and clarify issues associated with achieving those goals. Consider having the whole farm team meet to promote discussion, understanding and on-going commitment.
- **Schedule the next round** of assessment at the review session. For example in August when reviewing the outcomes of the calving plan (for a herd that had calved between May and June) schedule a second round of planning and assessment for the following March.
- **Develop partnerships** with other farm consultants where appropriate. This ensures that any tensions with planned actions in other domains are worked through as well as providing third party endorsement to the risk planning exercise. Furthermore, the third-party providers can prompt people to act in a timely way and provide a second tier of follow-up.

Integrating Countdown MAX into veterinary businesses

Veterinary practitioners liked the concept of Countdown MAX. It formalised a service approach that some had wanted to do (and had attempted to a small extent) to maintain the relevance of their business to dairy farmers.

> *"What I see is this really good opportunity for vets to take the step into permanent advisory work and redefine themselves, redefine their role…not just giving incidental advice while they are preg testing cows, doing feet or whatever else…" – member of the core partner development group from another industry project*

Countdown MAX was tried by all vets participating in the core partner development group and enthusiastically received by most clients. However the level of change needed across an entire practice to make the service self-sustaining was not achieved. Practice D came closest by offering MAX to a specific number of its clients but still fell short of its own target.

Adoption of Countdown MAX was also limited in two of the three practices that joined the pilot later (Practices E and H), an early indication that the extension of the service to other businesses would not be automatic.

The reasons limiting the adoption and integration of Countdown MAX into veterinary businesses were explored through qualitative analysis. Key questions explored by the research team were:

- Why veterinary businesses were not pursuing a new service approach even though they were attracted to the concept, recognised the need to reposition their work and had achieved some gains in the field?
- Under what conditions could Countdown MAX become a neat fit within veterinary businesses?

Countdown MAX was developed through a team-based approach that learned by experience and, as such, required considerable discipline when debriefing to stimulate reflection on approaches that would improve performance. These discussions, adviser interviews and email correspondence were coded using a software package (N-Vivo™) to enable analysis of how the workplaces of veterinary businesses, professional relationships between associates and practice resources influenced the adoption of the service (these being the key themes to emerge).

Another rich source of information was from in-house planning meetings in five veterinary businesses. The principal social researcher and Countdown project leader (both members of the core partner development group) facilitated these interactions between associates. This included discussion of the services offered by the business, the scope for Countdown MAX and the implications of including a MAX service in their business (see box this page). Analysis of this material gave ASI a better understanding of the higher level business planning required within advisory businesses.

Lack of business planning skills and acumen hindered the integration of Countdown MAX into veterinary practices.

Few practices had written business plans making it difficult to ascertain whether Countdown MAX fitted with the overall strategy for the business going forward. Its introduction accentuated the need for advisory businesses themselves to become more ***pro-active and planned*** in their approach to on farm services: to scope, resource and deliver new services within their practice.

Lines of questioning to facilitate business planning meetings in veterinary practices

- What the business looks like now: types of clients, types of services, size of markets, business structure
- What you would like the business to look like in 4-5 years: the operating environment for the veterinarian (a typical day), the mix of services delivered, workload and lifestyle issues, financial returns, succession and career pathways
- How you are going to get there: status of the business plan now, client profiles, necessary skill sets of individuals involved in MAX-type services
- Role of Countdown MAX in achieving the 5-year plan: development of services (mastitis and milk quality, others), getting clients ready for these services, resources and tools required
- Core issue for the business to resolve

As a partner in a practice and advocate for MAX commented,

> *"…to make change, serious change, you need to go right down to the deepest level of your business and also the most distant level of your business and make sure everyone is on board and that all your processes work towards making it happen" – veterinarian in the core partner development group*

There needs to be clear and unwavering support from the other business principals, some of who may not see the need for change nor share the vision of a different service model in the practice. It can be challenging to convince other partners of the benefits that will accrue to the practice by offering a new mix of services in its repertoire especially when the current approach is believed to be 'okay' and change involves risk.

Differences in seniority of partners in the practice and differences in individuals' level of risk aversion can introduce a power dynamic and further complicate the decision-making process. When enough consultations have been delivered within a practice it is possible to provide evidence to other partners that new service options are possible and realistic, although even this needs to be actively managed as a process.

Veterinarians found it easy to be distracted from efforts to develop a pro-active service given the ongoing demands made on the experienced practitioner. MAX requires resources dedicated to its delivery and suffered when time was continually crimped from it. Embargoing time within the day-to-day running of the business is necessary to avoid the 'tyranny of the urgent'.

> *"It needs to be a fundamental change to the way the practice operates because if you block out 2 hours in the day the nurses will hound you to do the lame cows as report writing is regarded as something that can be done anytime." - member of the core partner development group representing another industry project*

Most service businesses appear to be able to cope with an experienced adviser devoting 10% of their time to a MAX-type of activity without much internal change but once this threshold is passed change is needed to sustain the service. Although half of the advisers involved in the pilot spent more than 10% of their time on Countdown MAX, the pilot did not progress to a stage where MAX became a fully fledged service sustained within the practice.

A couple of businesses have approached the challenge of committing resources to support the introduction of Countdown MAX by employing additional professional or administration staff. Bigger businesses (five vets and over) were more able to backfill the existing workload in the short-term and were better placed to manage the risk of bringing on a new person than smaller businesses.

One assumption at the outset of Countdown MAX development was that the committed individuals who made up the core partner development group (who were all partners or principals in their practices) would champion the approach within their businesses and mentor others in their practices to also deliver the services. However there was little evidence of mentoring within practices during the pilot with other practice members being peripherally involved and MAX activities only occassionally being discussed.

Less-experienced practitioners need the guidance from those who are more experienced to deliver this service.

> *"… you can't just pass materials on. The opportunity to discuss [the approach] is invaluable." – veterinarian from practice A*

A parallel observation was that use of the lactation module did not extend beyond the two practitioners who were its developers to other members of the group. It appeared that unless an individual had been party to development of the service, he or she was unlikely to use it.

Administrative and support staff had an active role in three of the practices and this seemed a good indicator of the business's ability to integrate Countdown MAX. Their tasks included scheduling of the MAX visits, coordinating collection of data for analysis from the farm and herd improvement centres, and building a direct connect with clients. Consistent with marketing principles, regular contact from the business to discuss progress helped maintain client interest in an ongoing service.

Integrating MAX into a service business involves more than having the knowledge

Other essential features

- Individual practitioners believing in the value of management services
- Senior associates advocating the service
- Clarity around the place of MAX in the strategic plan of the business
- Adequate time and resources dedicated for service delivery
- Appropriate systems in place to support cycles of communication

Benefits of MAX to businesses

Assuming there is a low risk associated with making the necessary changes to the advisory business

- Grow the service business overall
- Improve client profitability
- Extend the range of services to clients
- Secure continuity of business within a service sector (eg dairying)
- Develop and enhance client relationships
- Provide job satisfaction
- Maintain interest of members so they stay keen to work in the sector

The business needs to know how to respond to client enquiries and have systems in place to administer Countdown MAX. Ideally everyone in the practice would be conversant with the principles of MAX and able to identify often subtle cues given by clients as points of entry to the service. They act as 'finders'[9] and channel enquiries on to the Countdown MAX champion, the 'minders'. Recent graduates in veterinary practice proved to be some of the most effective at funnelling work to the champion, probably because they have few preconceived ideas on what clients might like to participate in. Other staff then act as the 'grinders', keeping all the processes needed to support the services operating and on schedule.

Staging the introduction of tasks and responsibilities made for a smoother transition into delivery: enabling staff to become familiar with what was needed in each step of the service and to refine their tools and practices before facing a full complement of work.

Actively engaging clients in planned management of animal health in veterinary businesses will only suit a handful of practices. This is because facilitating and focussing the planning process extends the skills of some advisers, considerable experience is needed to apply technical knowledge within the context of the farm and many are uncomfortable selling knowledge alone.

Providing a knowledge-based service to dairy farmers seemed to disconcert many in a profession that is traditionally based on tangible clinical procedures or herd health products. It required a change of mindset for the vet as an individual and the practice as a whole because it contradicts the embedded culture of providing services on request for help that are predominately problem-solving.

At the beginning of the pilot every veterinary practitioner was working outside their comfort zone and needed a "***bit of a shove, a bit of confidence***" when offering the new service:

> *"Because we had to do herds [as part of the pilot] there were some differences in my approach. I was more forceful…[it has] encouraged me to continue to use this approach" – veterinarian from Practice D*

Many of the vets were not prepared to fully cost the delivery of the pilot. Their advice, which required postgraduate skills and considerable experience, was charged at rates less than conventional veterinary work. They explained their unwillingness to fully charge for services in terms of the downtime due to teething problems associated with development work (such as the time associated with manually deriving measures of udder health):

> *"I'm keen to incorporate it into my business but as yet I'm stumped as to how to work out what to charge for it ... if I'd worked out how to do the tracking and re-planning and packaged that in together it would have been easier." – veterinarian in the core partner development group*

The delay between the provision of the service (the analysis and planning) and its outcomes (clinical cases, premium milk payments and less workplace stress) adds another layer of anxiety for vets who already have doubts about their new role in this changing advisory approach.

Interestingly the sentiments about the fees charged were not reciprocated by farmers. On the contrary, most of the 12 farmers interviewed reported that their experience of MAX was well-aligned with what they had come to know of their vet and that MAX represented a further development in a trend towards a more comprehensive service.

The ASI research team suspects that the pricing of the MAX service will start to reflect its value to both the client and the practice over the medium term as confidence grows with the delivery of services and evidence mounts regarding the benefits on-farm.

The effort needed to get Countdown MAX 'up and running' in veterinary practices is rewarded by developing better relationships with clients, the satisfaction (on both sides) of achieving more profitable and effective outcomes as well as the considerable scope for the advisory business to develop ancillary services to the farm (such as on-farm training).

Footnote:

9. The "finder, minder, grinder" model of service delivery: "finders" are the people who go out and find new business, who are willing to make cold calls; "minders" are the ones who supervise the operation (organising the how, what, when and who to ensure work gets done, and looking after existing customers to make sure they return); and "grinders" do the support work.

MAX-type services and other dairy programs

The Australian dairy industry has already invested substantially in brokering a high degree of acceptance of best practice and creating supporting resources in the areas of milk quality and mastitis, reproduction, fodder conservation, feed sourcing and people management. Advisory services in the private sector have been an important route to market for many of the technologies developed by these programs. **The ASI research confirms that commercial adoption and adaptation of these technologies by service providers improves risk management and profitability on farms and has the potential to achieve on-going change in a sustainable form of delivery.** Collective investment by farmers (through their levy) to promote this capacity can provide substantial benefits to the industry.

It is important to adopt a 'systems approach' when analysing and advising dairy farm businesses. Although some experienced consultants are able to work in a number of the areas of management that make up a whole system, it is unrealistic to expect that individuals will 'cover all bases'. The challenge then is to find an approach that allows each component to be addressed in a way that is integrated with the whole. Countdown MAX is designed to make the mastitis and milk quality component of the dairy farm system fit with the other components and be transparent to them. The MAX approach is fundamentally suitable across a range of advisory businesses, particularly for consulting services that are actively seeking ways to contribute within their sphere of expertise to management of the farm system.

ASI does not have a robust model to offer other projects as the integratation of Countdown MAX into veterinary practices had only limited success. Nevertheless the pilot has demonstrated the potential for MAX services in the private sector and has already given birth to some parallel services. The most successful of these is a new business started by one of the core partner development group: a service dedicated predominantly to providing veterinary support to ensure farms are a "low risk" for mastitis through risk assessment, planning and scheduled review.[10]

Having a 'champion in the field', with a satisfied clientele and a healthy business, may spawn similar services into the future.

ASI did, however, identify several stalling points and some catalysts for veterinary practices to change to this different style of service.

Observations in this research were primarily made around veterinary practices. ASI learned that it is difficult for veterinary practices to change their service culture, they tend to struggle with process and that many practitioners are not confident in positioning decisions made about mastitis control within the broader farming system. These are unlikely to constrain consultants in other domains to the same extent, especially those whose business is already based on providing knowledge-based advisory services.

It is clear that individual businesses already consumed by a demanding workload will not have the time or in-house capability to develop MAX-type services. They do however need to be an integral part of the development process.

There is also a role for projects to help articulate the benefits of managing risk within their particular domain. This will enable advisers to better describe value propositions for their farming clientele during the engagement and assessment phases of MAX services.

Until now, interventions to improve management planning on farm have typically been the domain of farm management programs like Taking Stock. Taking Stock uses a classic farm management consulting approach and has successfully developed a process for dairy farmers to overview the physical, financial and human elements of their businesses. Over an 18 month period of drought response (2004-2005)[11] Taking Stock was delivered primarily by dairy company field officers to more than 2000 farm businesses. There was thought to be a considerable opportunity to move from a single (4-hour) 'taking stock' visit to ongoing delivery of the service through the private sector on a regular, repeat fee-for-service basis. The timing and content of Taking Stock seemed a good fit with services delivered by accountants.

Footnote:

10. www.dairyfocus.com.au
11. The program Dairy Moving Forward was an industry-wide collaborative effort to provide dairy farmers with support in the '1 in 100 year' drought 2003-2005

However they would need to recognise the value proposition of offering services beyond compliance accounting in order to take the next step.

By way of contrast the InCalf program is more closely aligned to Countdown, with support systems and recommendations located around decisions made at key points in lactation cycle. Therefore all the lessons from ASI for developing a proactive commercial service and integrating it into veterinary businesses would apply equally to InCalf.

As it is, many of the lessons have already informed the design of InCalf's adviser engagement strategy. The resources for the first two modules of the strategy, Bulls: power up! and Heifers: big girls XL, have been designed to fit the style and nature of businesses that have a real interest and active involvement in these topic areas with the aims of: focusing the energy and attention of service providers on the new resource (including stock and station agents, nutritionists and herd improvement staff as well as veterinarians); having techniques to help them open a conversation with farmers that is on topic; having ways of measuring current performance and assessing progress in that area; and promoting repeat use of the resource at the next relevant point in the lactation cycle.

A suite of InCalf modules would form a comprehensive MAX approach to reproductive management on farm because the gains made in each component (such as sufficient bull power, well-grown heifers and good AI technique) are additive. The one MAX element that is missing in this scenario is the mechanism that promotes 'systems thinking' - so that advice given within a topic area fits the needs and objectives of the farm business.

Many of the lessons from ASI could be applied to programs in other industries, both other farm commodities in Australia and overseas. In particular the dairy industry in New Zealand is likely to be able to make use of these findings because of its similar farming and advisory businesses.[12]

Given the importance of progress review and objective measurement, an additional likely industry benefit from MAX activities is the enhancement of data collection and collation from farms. If farmers prioritise or change their management activities through the data analysis and reporting that underpins review and replanning, they are more likely to participate in data flow that has industry-wide benefits.

Industry contribution to the next steps will be vital. Elements of the public-private partnership which require collective investment by farmers are: support and facilitation of development of MAX-type services in other farm management domains, and maintaining a regional advisory capacity to act as advocates for the service.

Footnote:

12. A current Memorandum of Understanding between Dairy Australia and DairyNZ sets out the intention to share research results, program development and program products where appropriate.

Lessons from ASI

The development of the MAX service

Participatory Technology Development led to a very different package than the one originally conceptualized by Countdown

The final design of Countdown MAX by the core partner development group was more technically sophisticated and attuned to what was driving decisions than Countdown's original blueprints. The re-design of Countdown Mastitis Focus will have ongoing benefits for dairy farmers beyond the reach of Countdown MAX.

The skills and experience needed to deliver a management-based service is high by industry standards

As well as being fluent in the principles of mastitis control, practitioners need to have a working knowledge of dairy farm systems, be able to facilitate sometimes complex discussions, maintain flexibility while aligning activities to best practice and inspire on-going action.

The plans need to be dealing with information overload and not adding to it

The strengths of the MAX approach are that it can be customized and reiterated as needed. The relationship between the service provider and client are also adaptable, so that a jump from an apparently minor technical issue to a full mastitis risk assessment does not need to be over-whelming.

Offering Countdown MAX on farm

Review was the limiting step in the Countdown MAX service

Progress review was often not done with any rigour and the service is unlikely to sustain without it. The extent of the implementation of the planned actions and will to re-plan is the ultimate test of the goodness of fit of a module with a farm business strategy.

The initial MAX consultations must be held well before the stage of lactation of interest

The initial Countdown MAX consultation needs to be timed within a specific window, 3-4 months before the start of calving and dry-off in seasonal and split-calving herds to enable the strategy to be planned and enacted. Having the owner, senior staff and farm consultants participating in planning encourages vigorous discussion and leads to broad commitment to agreed actions.

Integrating MAX into businesses

It is important that all business owners 'buy in' to the MAX service concept

Other principals in the veterinary practice need to regard Countdown MAX as important as any emergency or clinical-based service and be able to articulate how it adds value to what the practice does for dairy farmers.

Having a written business plan is "a need to do rather than a nice to do" for advisory businesses

Taking a service like Countdown MAX and embedding it into the business is very problematic unless there is consensus on its place within the business's goals. The successful rollout of MAX involves allowing staff sufficient time for consultations and analysis (dedicating resources and backfilling routine work practices) and fluently handling the logistics (having systems to review and plan events around the lactation cycle on individual farms).

ALL staff should be familiar with the new service and have clearly specified roles

Even those not directly involved in implementing MAX need to be familiar with the overall approach of engagement, assessment, planning and review. There are also advantages in having people apart from the MAX consultant involved to help co-ordinate the process and manage the data systems. The 'finder, minder, grinder' marketing model may be a helpful conceptual framework.

Consider phasing the MAX service into the business

A staged introduction allows logistical support to develop as the MAX workload grows while maintaining other practice functions. It could also be used as a window for developing the skills needed to support the new culture, for example practicing planning and negotiation, and actively reflecting on processes to improve them next time around ('learning by doing').

Expertise needs to be transferred to others in the practice

Transfer of expertise is necessary if the service is to be sustainable in the advisory business. An effective mentoring program would enable the practice to evolve the service as a team and become much less dependent on the MAX champion.

Application in other projects

There needs to be ways of coupling farm system 'thinking' with the technical expertise in the design and delivery of MAX services

Few consultants are able to work across all management areas of a farm system regardless of their competence and experience. The expert input needed to minimise risks and grow the farm business is more likely to be achieved through a model of service provision that enables technical contributions to be partnered with whole farm system thinking. This may be achieved by embedding the farm systems 'thinking' in the design of the MAX materials for a specific domain and/or by contriving partnerships between the two different types of consultants.

MAX does not need to be a "Rolls Royce" management service

The MAX elements can be incorporated into the design of resources for advisers to enhance the adoption of the technology.