

## The How, What, Why, and More of Writing Farm Processes

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Imagine the following scene. You are the herd veterinarian for a newly expanded 600-cow dairy. You drive to the farm at nine AM for your weekly reproductive visit where you work with the owner and general manager, who is also in charge of reproductive management on the dairy. When you arrive, the owner, Tom, is on the phone. You overhear, "Yes, I will take care of it; I'll get back to you." Tom hangs up the phone and brings up the Vikings game on Sunday. While you are chatting, one of the milkers comes in and says, "Tom, number 327 has a sore foot, can you look at her?" "Sure, sort her into the sick pen and I will check her later," says Tom. You chat a bit more about how the Vikings clobbered the Packers until Ralph, the feeder, walks in. Ralph says, "We are out of protein mix for the high group. There is not enough to feed them today. What should I do?" "Feed them low group protein today and I will order feed," replies Tom. Tom collects his thoughts for a moment and says, "I'm sorry Doc, and I don't have the list ready for today yet. Can you wait a few minutes? I just can't seem to get anything done around here." While you and Tom are working the cows Tom orders feed, answers a couple of phone calls and seems preoccupied. He offers that he hardly seems to get anything done and always feels guilty for not taking more time off with his family. "I expanded the dairy to improve the quality of our life, and I just don't see it yet, Doc. When will it come?"

You consider yourself an excellent diagnostician and problem solver. What is your diagnosis of Tom's problem? What can he do about it?

Tom's dairy is typical of many dairies in traditional dairy regions where family based dairies have existed for many years. Owners of these dairies often consider themselves good cow managers. They understand most of the processes on their farms. Indeed, they perform most of them on a daily basis. When they expand to a

dairy of hundreds or thousands of cows they no longer can expect success by being just a good cow manager. Tom's situation demonstrates that he could be a good cow manager, but that he needs to be a better monkey manager. Monkeys? Where are the monkeys? Monkeys are what are jumping on Tom's back all day long. Carrying all those monkeys around has made Tom tired and frustrated. To find the monkeys we must first define just what a monkey is. A monkey might be seen as a problem, but a better definition is this: A monkey is the *next step*. A monkey is what needs to be done next in any process on the dairy. Monkeys need someone to care and feed them. They are quick to jump to the back of anyone is willing to do so. When Tom said, "I will check her later" you, the astute diagnostician could see that monkey hop from the milker's back to Tom's. When Tom said, "I will get back to you" over the telephone, you saw the monkey come flying out of the handset and land squarely on Tom's back. When Tom ordered feed you saw that monkey disappear.

As you visit Tom's dairy over the next few weeks you become very good at seeing the monkeys on Tom's back. You observe that Tom is quite willing to accept the monkeys. In fact, it seems he is eager to do so. When anyone on the dairy asks Tom for something he seems eager to accept responsibility for doing something about it. Indeed he seems to want other people's monkeys. Why does he do this? There are probably several reasons. First, Tom does not have a defined structure for his business. He has eight employees and they all answer to him. He does have defined lead milker and herdsman positions, but Tom complains that their subordinates do not recognize their authority. Tom is in practice, everyone's boss and direct supervisor. They all enjoy giving their monkeys to Tom. Tom's employees do not work as teams to care for their monkeys because they do not know who their team members are.

Second, Tom does not have well defined processes on the dairy. The next step is never written down. When the feeder runs out of feed he does not know what he is to do, so off goes his monkey to Tom's back.

Third, Tom has not defined goals for his workers. They do not know what they are supposed to accomplish by the care and feeding of their monkeys. The feeder does not know that if his monkeys are properly fed the dry matter intake of the lactating cows will be about 54 pounds, and the weigh back will be between two and six percent on a daily basis 90% of the time. He does not know that milk production will average over 85 pounds when his monkeys are worked properly. This makes him willing to give his monkeys to Tom for proper care and feeding.

Fourth, Tom does not trust his employees because they have failed him before. Since they don't often know what to do, how to do it, or what they are supposed to accomplish, they work only for activity, not for results. Tom feels that if you want it done right, you have to do it yourself. Tom also sometimes feels that his employees only care about money and not about doing their job well.

There is a fifth and deeper reason. Tom, like many owners of small businesses, is unwilling to give up control. He is unwilling because of a deep-seated belief that success in life is scarce and fragile. He saw his dad and grandfather scratch a living out of the dry earth of South-eastern Minnesota in the drought years. He saw \$3.00/cwt milk and \$10.00/cwt hogs. When he sees other dairy producers being successful he somehow feels deficient and not happy for their success. Instead of developing a mentality of abundance he fears that allowing a subordinate to take initiatives and achieve success will somehow take something away from him and make him less strong and more vulnerable. He does not believe in the win-win philosophy. He needs to control everything on the dairy, just like Dad and Grandpa did.

It is clear to you, the astute diagnostician that Tom has not:

1. Organized the business
2. Organized work
3. Defined goals
4. Developed teams
5. Developed monitors of success
6. Fed back results to teams and employees
7. Realized that there is enough for everyone on the dairy to succeed.

It is clear to you that Tom does not understand how to manage monkeys, and unless he figures it out the dairy will not be successful. You know that the dairy seems to do reasonably well by monitors you use like production, reproduction and milk quality. You also know that things could be a lot better, that results could be more consistent, and Tom could be much less stressed.

You also feel that Tom's employees seem to have plenty of time to chat, work slowly or just hang out, and that Tom has absolutely no time for anything. You understand that the dairy must be better organized and that accomplishing the objectives above will:

1. Keep the monkeys from climbing up the organization to the top (Tom).
2. Allow employees to care and feed for their own monkeys.
3. Define who owns each monkey.
4. Provide monkey insurance, so that monkeys are cared for properly.
5. Make the dairy more productive and profitable.
6. Allow Tom to be happy with success.

But you don't know where to start. You, astute diagnostician, suggest Tom hire an expensive consultant. Tom agrees and retains the expensive consultant. The expensive consultant recommends the following to Tom.

1. Develop a business plan. Organize the dairy.
  - A. Determine your (Tom's) vision for the future
  - B. Write a mission statement.
  - C. Develop an organizational chart and define teams.
  - D. Develop goals for each team and for the dairy
2. Develop a process improvement plan.
  - A. Define systems in place.
  - B. Define actual processes used on the dairy.
  - C. Determine who owns the processes.
  - D. Establish ways to measure success of each process.
  - E. Diagram or flowchart processes.
  - F. Determine if processes are producing products that meet goals.
  - G. Align processes with actual procedures. Are employees doing the processes correctly all the time?
  - H. If processes are not producing expected results
    1. Modify processes or
    2. Retrain employees
    3. Monitor success (product) against goals
- I. When goals are being met, streamline the process.
  1. Benchmark the process.
  2. Can the process be improved?

The expensive consultant also explains that Tom must change his focus from personnel to process. In personnel focus:

1. Employees are the problem
2. We measure individuals.
3. We change the person.
4. We control people.
5. We motivate people.

6. We find WHO made the error.
7. We find a better employee.
8. We correct errors.

In process focus:

1. Processes are the problem.
2. We measure results.
3. We change the process.
4. We retrain or develop people.
5. We remove barriers.
6. We find WHAT allowed the error to occur.
7. We improve the process.
8. We reduce variation.

The expensive consultant suggests that an easy way to focus on processes and not personnel is to ask not who left the gate open, but why it got left open.

The expensive consultant explains that if results are poor (not meeting goals) then there are only two possibilities. Either the process is wrong, or the employee is not following the process and needs to be retrained. He explains that discipline is simply expecting employees to follow processes and holding them accountable when they don't. He explains that the best way to hold them accountable is not punishment or scolding, but feeding back results of the process. In fact, he says, if employees and teams understand goals and monitoring systems are in place, often the employees will discipline themselves because they know they are not meeting goals.

When Tom shows some skepticism and says, "I don't believe we have any real systems on this dairy. There are just things that need to get done, and someone does them." "Tom do you employ ants or people?" asks the expensive consultant. "People of course," says Tom. "Then do not expect them to just do what needs to be done. Ants do that. Ants work without direction to move things like a pile of sticks. They have no expectations or goals. There is no frustration from failure to achieve goals. People need goals. People need to work within a system and need to know what the system is supposed to produce. People are not ants."

"There is a system on your dairy. Your system is producing results. In fact it is a perfectly designed system. In fact, all your systems are perfectly designed." "How can that be? Why am I so frustrated?" replies Tom. "You are frustrated because your results are poor, but what you don't see is that your systems are perfectly designed to give you the results you are getting. You also don't see that to change the results you must change the system! Every dairy, every business has systems, but sometimes they are not defined. Decisions get made every day on this dairy; no matter how hard you try, you do not know how they are being made unless you define work (processes) on this dairy."

The expensive consultant presents Tom with a sizable report (and bill) and leaves the dairy. Tom feels like he just acquired another, huge monkey on his back. Somehow, you, astute diagnostician, feel the same way. You go to the library and read about management, quality improvement systems and business structures. You begin to understand that process development is part of a quality management system in any business. You read that quality management systems have four characteristics:

1. They cover a broad scope of activities in the organization. Processes are not just for treating cows. They are for milking cows, mixing feed, detecting heat and calving cows. They are even for managing employees.
2. Consistency of performance and results is paramount. Consistently bad is a better place to start than sometimes good. Quality systems never strive for perfection; they strive to reduce variation.
3. They emphasize prevention of errors rather than error detection. They do not just attempt to prevent problems from occurring again, but also try to prevent them from occurring in the first place.
4. They depend on measurements to determine effectiveness or identify problems.

You start to feel like all is not hopeless on Tom's dairy. You recommend Tom hire the expensive consultant again. Tom, who trusts you more than any other advisor, agrees reluctantly. The expensive consultant arrives on the dairy just as one of the milkers is telling Tom that one of the take-offs is malfunctioning. The expensive consultant introduces himself to the milker, and after a brief chat asks him two questions, "Who is your boss? What do you do here?" To which the milker replies, "He is (pointing at Tom). I milk cows." "How do you milk cows?" says the expensive consultant. "Well, I milk cows the way I always have. Some of the other guys do it differently." As Tom stares at the floor, the milker walks away. "We have lots of work to do; lets get busy," says the expensive consultant.

Over coffee and doughnuts the expensive consultant explains that Tom must establish: 1) Who is the boss? 2) Who is each employee's boss? 3) Who makes up the teams? To do this he forces Tom to draw an organizational chart and explains that communication should flow three ways in the chart. It should flow down from the immediate supervisor to the next level employee. It should flow back up to the supervisor. It should flow horizontally between employees on each team. It should not flow from Tom, the really big boss, directly to an employee several tiers below him on the chart. As you swallow a particularly creamy bite, you begin to see that the chart is kind of a monkey fence. The monkeys can't jump from the bottom to the top, just



to the next level. Since the expensive consultant is expensive, he must leave the dairy. You do not know this, but he is never to be seen from again. You think Tom is excited, and will improve his situation.

When you arrive next week you expect Tom to be upbeat. He is not. "Doc, I have 30 treated cows in the sick pen. My somatic cell count has risen to 600,000. This is costing me lots of money. You have to help me fix it." Since you, astute diagnostician are also an astute veterinary consultant, you know just what to do. You have been through this routine many times (you have a defined process for investigating mastitis problems). You suggest bulk tank cultures, milking system and procedure analysis, and cow culturing pending bulk tank analysis. Tom, always trusting of your recommendations, says, "When can we start?" You offer to come back tomorrow morning to do a milking time analysis.

You have trouble sleeping that night because you wonder if your usual approach to Tom's time of problem will work this time. Tom has too many monkeys and his employees do not seem to take responsibility (monkeys) for problems. You wonder if just identifying the problem and making recommendations will be enough. You decide to use the recommendations of the expensive consultant in your problem solving process.

You perform your milking time analysis as usual and find several serious technique problems. You find that the parlor and prep routines vary according to milker. The equipment has some minor problems. You meet with Tom the next day and explain the problems. "I don't think I can get my milkers to do that procedure," says Tom. Armed with your new knowledge, you say, "Let me help you Tom." You proceed. "Tom show me your organizational chart so we can determine who is on the milker team." You see that there are milkers and one lead milker. Next, you say to Tom, "What are the goals for your milkers Tom?" Tom says, somewhat befuddled, "To milk all the cows, of course." "Ok, great," you say. You write: "qualitative goal: to get all the cows milked in the time allowed". "What else?" you say. "What else is there?" says Tom. "How about to achieve a somatic cell count below 200,000?" you offer. "Lets start at 250,000, but I like the idea," says Tom. "How about less than 1% new cases of mastitis per month?" You offer. "Great, but I think that is too high for now, let's use 2%," replies Tom. You write down: "quantitative goal: SCC < 250,000, new cases < 2% per month." Next you bring in the lead milker, Mike, and after getting his input, explain that you understand that he is in charge of the milking team, and that Tom is willing to allow him to be in charge of the milkers within certain guidelines. You explain that the milkers are largely responsible for the results of the system of milk quality on the dairy, and that the actual milking procedures used are causing problems. Tom explains that success

of the system will be measured by somatic cell counts and number of new clinical cases. The lead milker says, "Number of new clinical cases does not indicate the number of chronic cases. There are a bunch of cows on this farm that practically live in the treated pen. I think that there should be a goal of less than six cows in the treated pen at one time." "Sounds fine, Mike." "Write that down, Doc," says Tom. Next you explain the diagram explaining parlor routine and the flow chart of prep procedure that you developed following your milking time analysis. You explain why it is important. Tom informs Mike that you, the astute and expert veterinary consultant, will explain the new routine to the milkers and demonstrate it to them in the parlor. He tells Mike that it will be his job to make sure it is done correctly following your visit.

Everything goes well at the meeting and everyone is excited, except Burt. Burt is a night milker and is used to doing things his way. You caution Tom that he will have to expect Mike to carefully monitor Burt. You explain that if Burt is to respect Mike's authority, direction must come from Mike, not from Tom. Tom is skeptical, but willing to try.

In two weeks you notice the somatic cell count is 400,000. You find Mike and ask him for his impressions. "Well, the somatic cell count is down to 400,000 and we have ten cows in the treated pen, but things still are not right," says Mike. "Do you know why?" you ask. "Its Burt. He's just so bull headed. He will do the procedure when I am there, but as soon as I leave, he goes back to his old routine." "Let's talk to Tom," you, the astute, expert diagnostician, veterinary consultant, and super duper management consultant, say. "Mike, you need to show Burt the goals for his team again. Explain to him that things are better but that he is impeding future progress. If he persists in this behavior we may have to take disciplinary action. Please document all your recommendations, observations and discussions with Burt," says Tom.

Two weeks later when asked about progress Tom says, "Great. SCC is 325,000 and headed down. In the last two weeks there have only been two new infections. Mike is really shining in his job. I never believed he could really supervise the other milkers. The milkers seem happier too." "What about Burt?" you offer. "Burt left us. When confronted, he just would not agree to do the prep the same as everyone else. We hired Tony, and things are going better. In fact, having written goals helped me write a job description for the position of milker. Tony knows just what he is supposed to do, how he is supposed to do it, and what is expected in terms of results," replied Tom". "Doc, for once I feel like something is in control on my dairy. Yet, somehow strangely, I feel like I don't have to control it. I feel lighter." You notice that the monkeys (slightly reduced in number)

on his back look nervous, like they expect to have to jump to someone else.

Over the next few weeks you help Tom develop recording systems for milk quality data. He develops a monthly report for Mike to present to the milking team. A graph of somatic cell count and number of cows in the treated pen is posted on the wall in the break room where everyone can see it. You notice Tom is walking a bit straighter and has less monkeys on his back. He seems less busy, yet results on the dairy are improving. You are pleasantly amazed.

In the next twelve months you and Tom tackle other problems on the dairy. Reproductive efficiency is first; then production and then labor costs. Tom seems much taller than you remember. He also seems even more appreciative of your services and begins to think you can walk on water.

You, astute diagnostician, expert veterinary consultant, and super duper management consultant apply your new skills to your own business. You would like to spend more time with your family. You want to stop bringing work home. You don't want to do dairy rations on your computer at night. You want your employees to be as busy as you. You want them to be busier than you. You begin with an organizational chart. You discover that flow charts and organizational charts can be drawn in your computer with programs like *Microsoft Word*, *Powerpoint*, *Visio*, or a neat little program called *All Clear*, made by a company called Clearsoft. You discover that processes always seem to be changing, and that employees often have the best ideas how to change them. You understand that your employees can write many processes. You begin to think about goals and how to feed back results to your employees. You now understand why writing farm processes or protocols is not just a way to describe how to treat a cow, or a way to insure AMDUCA compliance. You discover how to bring protocols to life. You become an expert at the science of care and feeding of monkeys. You find that you:

1. Shoot or feed monkeys. You do not let them starve causing you to spend valuable time performing postmortems or CPR.
2. Practice population control. You do not try to maintain too many monkeys.
3. Feed monkeys by appointment only. You do not try to catch them.

You notice that you begin to feel like your employees are working for you and you are not working for them. You are no longer the first person in the office in the morning and the last to leave. You can remember your children's birthdays. You, astute diagnostician, expert veterinary consultant, super duper management

consultant, and great dad/mom and husband/wife feel good about yourself and your impact on the world.

Deming said that when any process is in control, variability will be only 6%. He defined two types of variation. Special cause variation is unpredictable and represents a process that is out of control. 94% of the variability in a process under control is common cause. Common cause variation represents the normal ebb and flow of things that affect the process output. This could be the small number of new mastitis infections that occur on a dairy on a regular basis, for example. When a process is out of control, more of the variability in results is due to special cause variation, such as a malfunctioning milking system or irregular prep procedure. The process is in control when the product or output falls within the upper and lower control limits. Proper documentation of protocols on a dairy can help keep variability within 6%. Most dairies probably never approach this level of consistency in critical process, yet in any environment consistent execution of processes is the key to consistent results. Dairies, like any other small business must learn to define processes for critical areas of the business. If they do this, and have methods in place to ensure that employees will execute the processes correctly, they can predict results and achieve their goals. If they don't results will be inconsistent. This inconsistency will be blamed on the weather, bad luck, bad employees, or a bad advice. You, astute diagnostician, expert veterinary consultant, and super duper management consultant can help dairies achieve this consistency of results. You can help them achieve their goals.

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