

## **Designing the Management System for Your Dairy**

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Simply stated, successful large dairies get results through people. Large dairy owners and managers might do well to ask themselves, "Do I know the results of the decisions my employees make daily?" For example, cow #100 is 85 days in milk and appears nervous, showing subtle signs of heat. Will my herdsman identify her? Will my herdsman breed her? Should this cow be bred in the morning or the afternoon? If the estrous mucous appears abnormal, should this cow be inseminated? Should she be treated? What will my herdsman do? How will I know?

Success is managing your employees to do it *your way*. What is the management system to define *your way* that enables you to trust that your employees will do it?

### **CASE STUDIES**

An 1,800 cow dairy in the Southern US experienced a severe problem with fresh cow health for 3 months. Retrospective evaluation of records indicated an incidence of displaced abomasums of greater than 10 % of fresh animals from February through May. In July, displaced abomasum incidence was reduced to less than 1 %. The reason for the dramatic improvement: **MANAGEMENT** changes that improved how employees treated sick fresh cows and reduced cow lock-up time.

A 1,500 cow dairy in the Southwest milked 2 times per day through a double

24 parallel parlor. For 2 years, their somatic cell count (**SCC**) remained below 250,000. In the summer of 2009, SCC rose to above 350,000 and attempts to change milking routine to improve SCC resulted in failure to get all cows milked twice in a 24-hr period. By fall of that year, 1600 cows could be milked twice in 20 hr and SCC is again below 250,000. The reason for the dramatic improvement: **MANAGEMENT** changes that improved how milkers paid attention to detail to execute the milking routine correctly.

A 900 cow dairy in the upper Midwest persistently had heat detection rates of 45 - 55 % according to Dairy Comp 305 record evaluation from January to June, 2009. During the second half of 2009, heat detection rates averaged 65 %. The reason for the dramatic improvement: **MANAGEMENT** changes that improved how the herdsman and breeders focused on secondary signs of heat and applied the Ovsynch breeding program.

This paper will discuss management strategies to affect results.

### **WHAT IS MANAGEMENT?**

Management is often credited or blamed for the success or failure of dairy business productivity and profitability. It is a term widely used, but with an elusive definition. Management may be defined as the control of systems and people (Gerber, 1995). Systems are the

method of doing work; workers implement systems (Scholtes, 1998). Managers define and develop systems; they influence workers to implement systems properly.

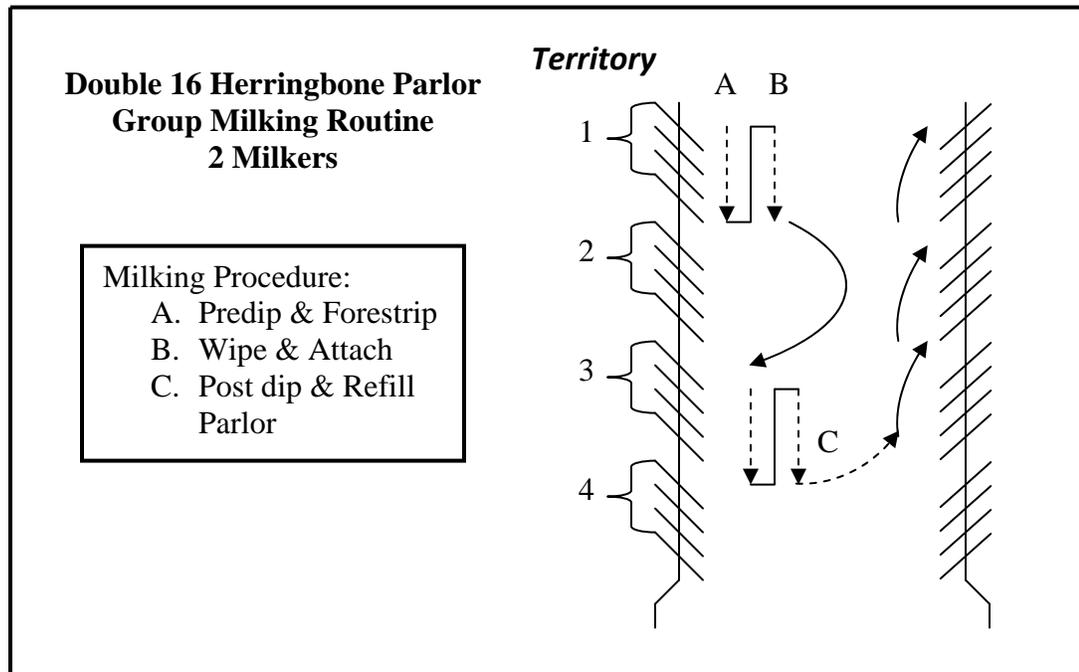
To illustrate, a milking routine is an example of a system. The appropriate milking routine designed for a specific parlor will produce optimum results when milkers implement each step of the routine properly. Optimum results must be defined by the manager and would probably include some measure of throughput and milk quality in this example. The manager then is

responsible for defining the milking routine, coaching the employees to implement the routine, and monitoring results.

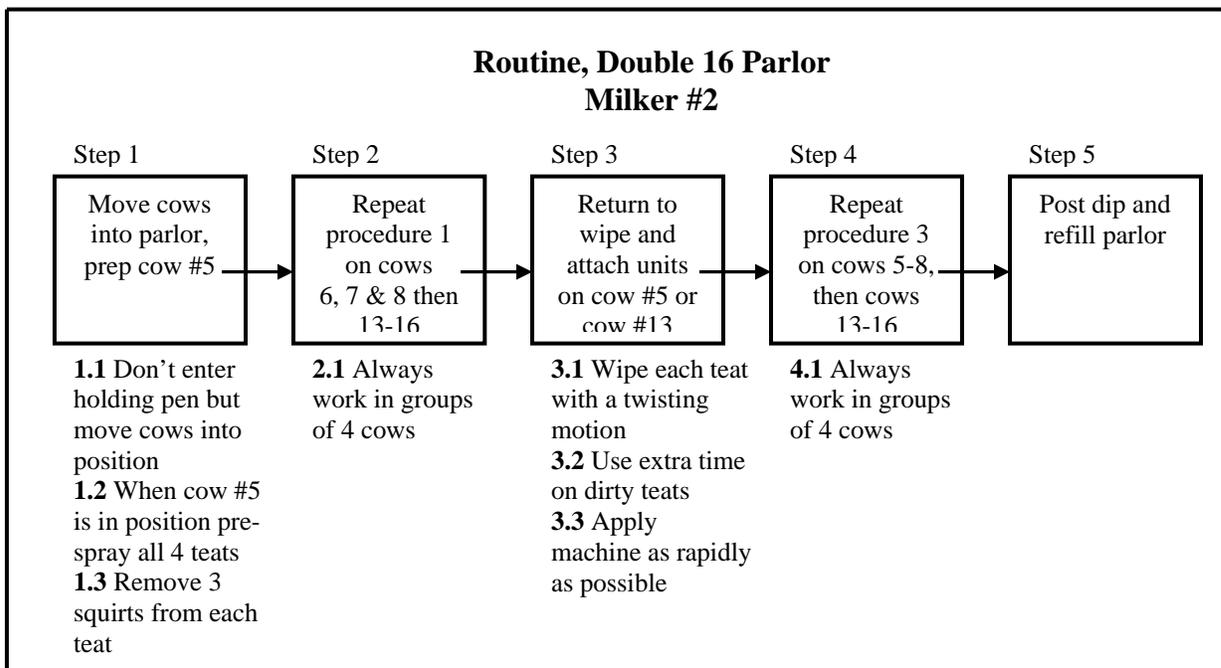
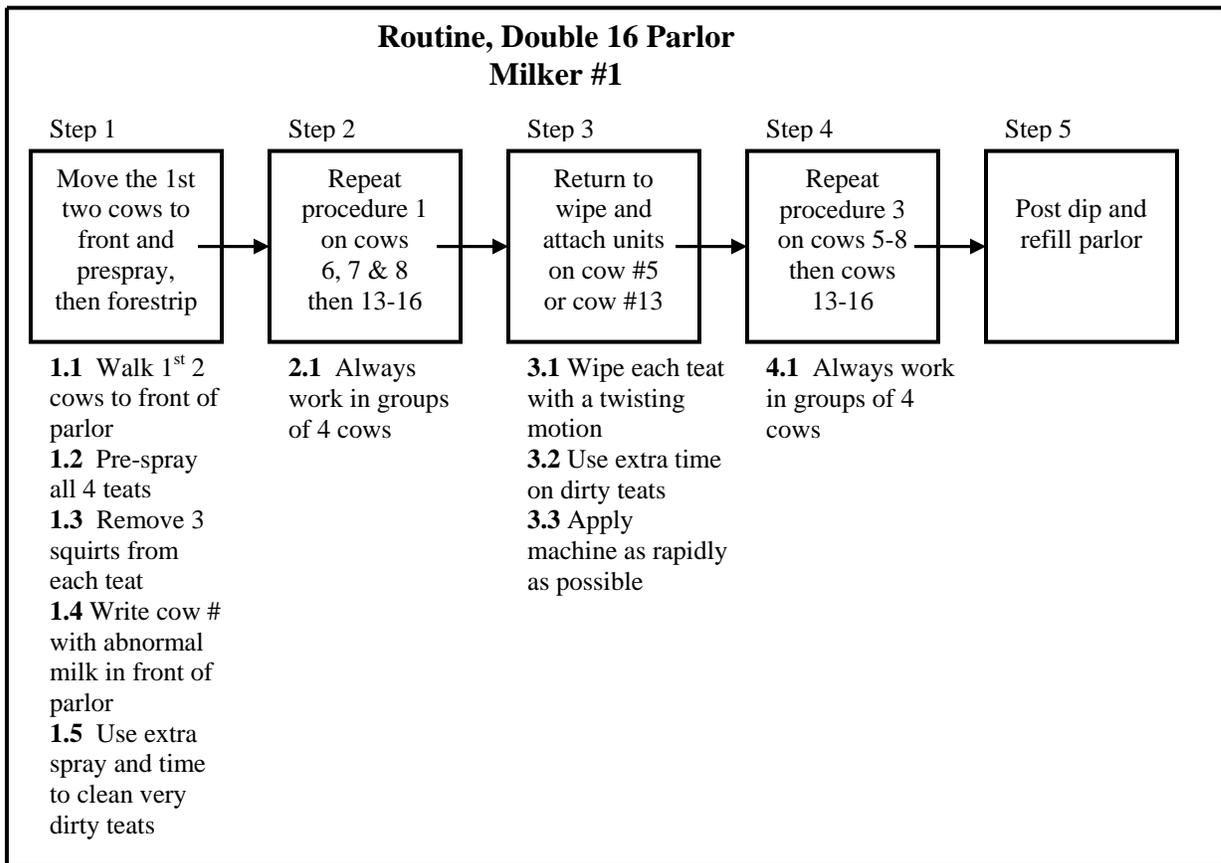
The process to manage employees includes 5 steps:

- 1) Define the system or the work,
- 2) Train or educate employees,
- 3) Monitor results,
- 4) Coach and discipline, and
- 5) Communicate and provide feedback.

**Figure 1.** Group Milking in a double 16 herringbone parlor



**Figure 2.** Milking Routine for Milker #1 in a double 16 parlor



## **Define the System**

Work is a system (Scholtes, 1998). Each system can be reduced to several steps, called processes. Each process can be further subdivided into tasks. Milking routine, the system, can be divided into 3 processes or milking procedures. As an example, the first procedure might be to pre-spray and forestrip each cow; the second procedure to wipe and attach units, and the third to post-dip and move the opposite side of cows out of the parlor. The first procedure, pre-spray and forestrip, can be subdivided into tasks such as:

- 1.1. Spray all 4 teats with the left hand,
- 1.2. Forestrip 3 squirts of milk from each teat examining for abnormal milk, and
- 1.3. Re-spray and clean any of the 4 teats on which excessive dirt remains.

This system, for example, can be applied to a double-24 parallel parlor with 2 milkers and a cow pusher as illustrated in Figures 1 and 2.

## **Train or Educate Employees**

Principles to train employees are well documented (Erven, 2000). These include:

- a) Prepare the individual by describing the conditions of the work,
- b) Tell the worker the steps of the work (using the flow chart is helpful),
- c) Show the worker (have him watch other milkers), and

- d) Have the individual do the work (for example, with the lead milkers).

Training is always necessary whenever there are one or more employees; training is not necessary if work is not organized by the manager or supervisor-in-charge.

## **Monitor Results**

Results are goals; the key indicators should be written out by the manager. For milking management these might include, but are not exclusive to: bulk tank bacteria counts and SCC, incidence of clinical mastitis, and cows milked per hour. Monitoring implies that the manager collects, analyzes, interprets, and takes action on the key indicators. This system of information management on a dairy not only monitors cow performance results, it emphasizes monitoring worker results. In the example of milking management, bulk tank bacteria goals can be met consistently when milkers execute the details of a well-designed and trained milking routine.

## **Coach and Discipline**

Coaches neither own nor play the game, yet they build the game plan by organizing and training or re-training players (Barmore, 1995). Coaching brings out the best in others by recognizing employees for doing the work, implementing the system correctly. Or managers apply discipline through re-training. Managers can be candid and honest in re-training employees when they stray from implementing the system. Managers can

be equally vigorous to inspire and build confidence in workers found to be implementing the system correctly.

Each manager intuitively applies his or her own standards to the observations and interpretation of results. Unacceptable or mediocre results occur when managers do not make clear the standards to which workers perform. Dairy managers fail to coach or manage milkers by ignoring to correct (e.g. re-train) improper work habits, as well as by failing to acknowledge good work.

### **Communicate, Provide Feedback**

The number one factor to motivate employees is feedback on results (Blanchard and Johnson, 1983). Communication to employees needs to be direct, specific, and timely. It can be done one-on-one or in meetings. Monthly data analysis can become the agenda for monthly worker meetings. When is the last time you communicated with night-time milkers?

## **STRATEGIES TO MANAGE CHANGE**

Managing to improve implies managing change. Change occurs through one of two strategies: redesign the system of work or re-train workers to implement the system better. Change can be managed through a 6 step process. Improving milking management can be used to illustrate this process.

### **Step 1: Define the Problem and the System Deficiency Contributing to the Problem**

A 2,000 cow Southwestern dairy had a history of maintaining bulk tank SCC of less than 250,000 for the previous 2 years. SCC dramatically rose to over 400,000 and clinical mastitis elevated to greater than 5 %. Environmental streptococcus bacteria were the dominant pathogen identified in bulk tank milk.

Milking routine with 2 milkers and a cow pusher was territorial in the double-20 parallel milking parlor. Prep-time was inadequate compared with industry standards; this contributed to failure to adequately clean teat skin surface. Prep-lag time was short and extremely variable from cow-to-cow. Milking was slow and teats were not clean.

### **Step 2: Formulate a Plan for Change**

Change was initiated when the dairy owner called a consultant to evaluate the situation. An alternative milking routine was proposed and agreed to by the owner. The consultant and dairy owner discussed the need for milker training to demonstrate the new routine and to get the milkers to *buy in*.

### **Step 3: Develop a Consensus among Employees**

The dairy manager, milkers, and consultant met to discuss the problem and proposed changes. Milkers were asked to critique the proposed routine and their role in implementing it. Why should there be change? Is the new routine better? Can it be improved? Consensus resulted in everyone agreeing the changes could be beneficial.

#### **Step 4: Redefine the New System**

The new routine was depicted in a flow diagram. Differences between the old and new routines were clarified.

#### **Step 5: Demonstrate the New System**

Teaching, through example, can be powerful; demonstrating how and why clarifies practical implementation of a proposed system. The dairy manager and consultant milked with each shift of milkers; the new routine was implemented as proposed. Prep-time, prep-lag time, and teat cleanliness were re-evaluated; all were improved.

#### **Step 6: Coach to Develop a New Habit**

Habits are consistent, unconscious patterns (Covey, 1989). Breaking habits, such as an old milking routine, requires a conscious, consistent effort to replace a previous activity with a new activity over time. Managers coach change in milkers by observing milkers in the new routine, reinforcing the consistent positive implementation and re-training when milkers revert to old habit. Managers need to commit to 3 weeks of active coaching.

### **SUMMARY**

Proven personnel management principles can be applied to large dairies. Dairy owners may not have had opportunities to learn these principles and advisors often fail to provide specific, practical examples applicable to the dairy business.

Large dairy owners entrust both decision making and delegation of tasks to middle management employees such as herdsmen, head milkers, and feeders. Training middle managers to manage fellow employees can improve their decision making and consistency of results. Then as dairy owners manage to improve results, change can be orchestrated through a 6 step process that can improve productivity and profitability.

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