Using Traceability to Energize Your Labor Force

 Submitted as an article for the July 2007 issue of Food Traceability Report.

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Continuing this column's theme that traceability is not an end by itself but a new methodology that provides managers a new toolset for identifying and realizing new value and boosting profits, this month we show how traceability can be used to address labor issues – labor cost, labor productivity, and ability of labor to effect quality.

Within the agri-food industry, obtaining adequate quantities or appropriately trained labor remains a continuing management challenge. Top management has mentioned labor as a primary concern at nearly every company visit we've made in the last year. Managers want to know how they can effectively and economically reward the best employees, improve labor productivity, and provide focused training for those employees who need it.

What may surprise many readers is that a well-designed and implemented traceability system can achieve these objectives. It doesn't make any difference whether the agri-food enterprise is a farm, a ranch, an aggregator (grain silo, cattle feedyard), packer, processor or shipper. Well-designed traceability systems can generate both the raw information and the visualized on-line reporting tools that can help any management team get the most out of their labor pool.

Let's look at some of the labor benefits from traceability installed system in client companies..

More accurate piece rate. Many agri-food companies use various piece rate systems to pay their employees. Most of the systems we've seen are manual – both to collect and then to calculate the payroll.

We've seen systems where the employees self-report the number of cartons they've packed via a form they give to their supervisor. The supervisor visually reviews the form and then files it with the payroll department who has a clerk key the data into a computer system. The key disadvantage of this type of system is that when all the self-reported production is tallied, the self-reported production is well more than the enterprise's total production meaning that some employees are being overpaid for their true production and there's no easy way to know who's not telling the truth. Another disadvantage is that it takes floor time for the employee to keep track of their production, for the supervisor to review the reported piece rate, and for the payroll clerk to key in the report. Transcription errors also occur.

Some companies have their employees put a unique mark on each unit they produce and have an employee later in the process tally all of these marks, fill out a form and submit to payroll for keying into the system. While this approach is more objective and less self-serving for the employee, it is still very labor intensive.

The best solution we've seen, and one we've used in a number of implementations, is the traceability system automatically records the production unit's creation and automatically associates the production unit with a specific employee. The traceability system then automatically updates the employee's payroll record for each carton, notifying their supervisor via a real-time dashboard how the employee is doing compared to their minimum expected performance, and their historical performance, and automatically calculating the piece rate payroll for the employee.

This approach not only removes the human subjectivity from the equation and reduces labor, but it provides a highly accurate, actual performance count and it gives supervisory management a real-time look at who may need help. When an employee who is normally quite productive shows a dip in

performance, it's a clue that the supervisor should probably pay them a visit to see how the supervisor can help.

Some people have implemented an automated piece rate system by having the employee put a label on the box and then manually scan the label, feeding the scan information to the traceability system. The downside of this approach is that it adds floor or field labor to each piece rate employee and requires the capital investment of automated scanning and electronic data reporting equipment to each piece rate employee. We don't think this is a good trade-off and have developed systems for automatic data collection that don't require this capital investment for the employee, and don't add much time at all to the employee's task.

In fact, after evaluating throughput using this system, the results show that not only didn't the company have to make a data collection capital investment for each piece-rate employee, but the system did not slow down production at all. Additionally, labor to produce an accurate piece rate report was dramatically reduced because you didn't need to have people in the production process manually counting marks or manually entering the piece-rate data into the computer, and the total production paid to laborers was the actual production number. A number of companies using traceability system with the piece-rate module have not only reduced their piece-rate pay-outs and provided a more accurate piece-rate payout to each employee, but have reduced the labor overhead cost to generate their piece-rate payroll.

Improved quality. Probably one of the biggest advantages of implementing a traceability system with a labor tracking module is to improve the quality. How does this improvement occur?

The well-designed traceability system preserves the identity across product transformations and can build the pedigree of a finished product shipped to the customer back upstream to all of the specific pieces and parts that created the finished goods. By also associating the employees which worked on each specific piece and part, we know the pool of employees who had some part of producing a single, specific finished goods item.

If, for example, the finished goods were a fruit or vegetable product, we know who planted it, who was involved in various cultivation activities, who harvested it, who handled it during packing and who finally boxed it. Knowing these facts, by themselves, isn't all that useful. However, if at each production stage, the employees receiving the product as well as the end-user customer ultimately receiving the product evaluate the product's quality, then gold stars (for good quality) and black marks (for poorer quality) can be sent back upstream to each person who was involved. By reviewing over time the average number of black marks or gold stars at each stage of transformation, each facility and each genetic source are receiving, clear patterns emerge where quality is being enhanced and by whom and where quality is being reduced and by whom. The roadmap to enhanced quality typically becomes obvious.

We must hasten to add that quality isn't affected 100% by employee interaction. Genetics and location play a huge role. But when these two factors are held constant, the impact of employee interaction with the product becomes quite apparent.

An additional side benefit when this module is added to a traceability system is that the sales people downstream get an early look at product quality as it is being evaluated during the production process, and can better determine which markets to approach when the product is ready for sale. The result is a better market match and, typically, increased revenue.

Better labor utilization. In several systems, we've found that presenting near real-time labor tracking information to managers (where employees are and what they're doing), these managers have been able to detect logjams and rapidly redirect labor to fix certain production flow problems, reducing the amount of idle labor. In one such project where all of the harvesting labor and equipment were being tracked and reported to remote managers/dispatchers, the dispatchers were able to detect backups and slow-downs and reduce the amount of queuing in the farm field of the trucks waiting to be filled by redirecting trucks to harvesting groups that needed the labor. Over a harvest season, one company reported an 18%

reduction in the harvest time and concurrent reduction in harvest cost by better knowing where each laborer actually is and seeing and reacting to the “big picture”.

Improved labor productivity. Having a traceability system with a labor tracking module that provides results in near real-time can be also used to improve labor productivity and identify focused training needs. Let’s face it, most agri-food labor tasks are highly repetitive and inherently boring. Well-run companies try to manage boredom by rotating assignments and providing appropriate breaks. Another motivating factor is to provide the employee feedback on how they’re doing – comparing them against recent history and their personal best, and the general working population.

A well-designed system uses these performance statistics as an interesting carrot, not a stick and let’s the employee themselves understand their performance compared against averages of their peer and where they “stack-up” in the rankings. By appealing to the employee’s sense of personal pride, and providing performance feedback to the employee in near real-time, the employee now has a “score card” to self-evaluate their performance. Supervisors also have a way to objectively determine which employees may need additional training.

Labor remains one of the key costs in any agri-food enterprise. Increasing labor productivity and using tools to help the labor force improve product quality is one of the many benefits that can result from implementing a well-designed traceability system.

Further information can be found at www.qlmconsulting.com, www.sjhandco.com, and www.aginfolink.com.