

Traceability – Start Small and Then Expand

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You know you want your company to begin a traceability project, but you don't know where to start.

Our experience over the past four years has shown that the right way is to start small and then expand. Begin with a relatively simple problem that appears to have a high return on investment, and then use this foundation as the basis for expansion to reap the other traceability benefits.

So, what problem to solve? Some companies have begun by looking at a part of their operation they believe is inefficient. One of the agricultural companies with which we work identified their piece-rate field harvesting payroll system as an area they wanted to make more efficient.

The project they contemplated would automate the payroll picking process in such a way that the basic attribute information on each appropriately sized unit of production was collected simultaneously with the payroll event when the employee completed each harvest load. Automating the payroll system generates the savings, and the attribute information on each harvest load comes along for the ride.

In later projects with this company, this attribute information will be linked to downstream processing performance to help improve their production quality. For the moment, however, the focus is just on making the payroll system more efficient. Beginning a traceability project by focusing on increasing efficiency, productivity and improving gross margins isn't limited to agricultural producers. Processors, distributors, and retail organizations can each use the traceability tools to help them become more efficient.

Some companies have begun by wanting to provide visibility and transparency on a part of their operation to downstream buyers. These companies feel that providing their downstream customers with a window on their growing and harvesting activities provides them a competitive advantage, because the downstream processor can get an early look at both the progress of the growing product as well as the attribute qualities of that product. As in just-in-time manufacturing, time is one of the most important value drivers. The earlier processors can obtain information about when the raw product will arrive and the characteristics of that product, the better they can fine-tune their processes to be more efficient. One of our operations began providing this visibility to their community of participating growers and processors by making the grading information of each truckload of product available via the Internet.

From this simple beginning, the company has expanded the project to deliver additional traceability value by providing earlier visibility on the product during the growing phase,

and by collecting more agronomic attributes about each growing unit – especially the chemicals in use. Other companies have begun their traceability journey by focusing on areas of their operation that they feel expose them to too much potential risk. While this approach doesn't generate an immediate cost savings, it does provide an important insurance policy in this era of highly visible and costly product recalls. One company with whom we've worked began their traceability project by picking a relatively small number of high-risk product codes (SKUs) used in their final product and tracking the lot numbers from the various suppliers of those products. Managers chose eight SKUs with about three or four suppliers apiece. By tracking the lot number of the upstream ingredient and pairing that information with the lot number of the finished product, they created the basis of a traceback and trace-forward system that would allow the company to quickly generate traceability maps of potentially affected product in a matter of minutes.

The company ensured that this insurance investment was expandable by also collecting some very basic performance data on each lot of produced product. Later, managers will be able to compare the variability of product output with the source of the various ingredients. From experience with other customers, we believe this analysis will provide very useful product improvement information.

Probably the most ambitious way to begin is to try using a traceability project to improve the company's product immediately. Some companies have begun this way, and they have been successful.

One of our processing customers was approached by its downstream customer to provide a product that had a specific characteristic for the consumer. Our processor customer didn't have that product, and the firm wanted to be able to provide it to remain competitive.

Company executives had heard us talk about the benefits of managing by the product attribute of the appropriately sized unit of product instead of managing by groups of blended product. They asked a member of our group to run a pilot project delivering different loads of raw product (wheat), each with different specific attributes. Even though our processor customer was predisposed to believe attribute isolation would yield an improved product, executives expressed astonishment at the results. First, the raw product that ultimately generated the desired consumer characteristic would normally have been rejected at their receiving dock. The raw product didn't have the appearance the processor customer thought was important to their final product. After a bit of discussion, they agreed to manufacture it.

Second, the results of this manufacturing run not only provided the desired consumer characteristic, but it had much higher yield and other manufacturing characteristics that saved the processor customer money. When reviewing this last example, please remember that beginning with product improvement as the traceability motivator has been the exception to the rule. Most companies don't start by focusing on product improvement, because the key question always asked is "Who will pay?" Convincing the company's bean counters of the merits of tracking is more quickly done by concentrating

on a core function of the company's output – one module, as we like to call it. Product enhancement is the ultimate goal, but achieving this goal is usually a massive project, because you engage your entire supply chain. It's better to begin small, solving very finite and well-defined smaller projects, and then expand to tackle product improvement.

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