

How Does Your Garden Grow?

Digging around to find the root of a problem

WHEN I WAS IN GRADE SCHOOL, I decided to enter a gardening contest for 4H. Though I had experience helping out on farms, I really didn't know anything other than to do as I was told. After procrastinating the startup and being a bit lax on the weed pulling, I did not win any awards for my plot of land that year. But I did get great advice from one judge who stayed behind to talk with me about my pathetic effort. She squatted down next to the plot, took a big handful of dirt in her hand, and said, "What you have to remember is that gardening starts with the soil."

I do a lot of quality initiative projects, and like any good garden, quality starts with the soil. Often these projects begin with a quality control manager introduc-

ing me to the quality inspectors, then showing me their quality guidelines, manuals, and inspection procedures. And invariably, the companies are a bit surprised when I end up scrutinizing their purchasing activities, evaluating vendors, and taking a hard look at all their manufacturing processes.

IDENTIFYING THE BAD APPLE

One of my clients had a consistent problem with removing way too much metal in the manufacturing process, leading to prongs that were not strong enough to meet their quality standards. As a result, bad quality occasionally slipped out into the market, and a lot of scrapping and starting over occurred in-house. It was all very expensive! They called me to address

thin prongs making it all the way to customers. They wanted to know how they could make their quality standards strong enough to never let bad quality through.

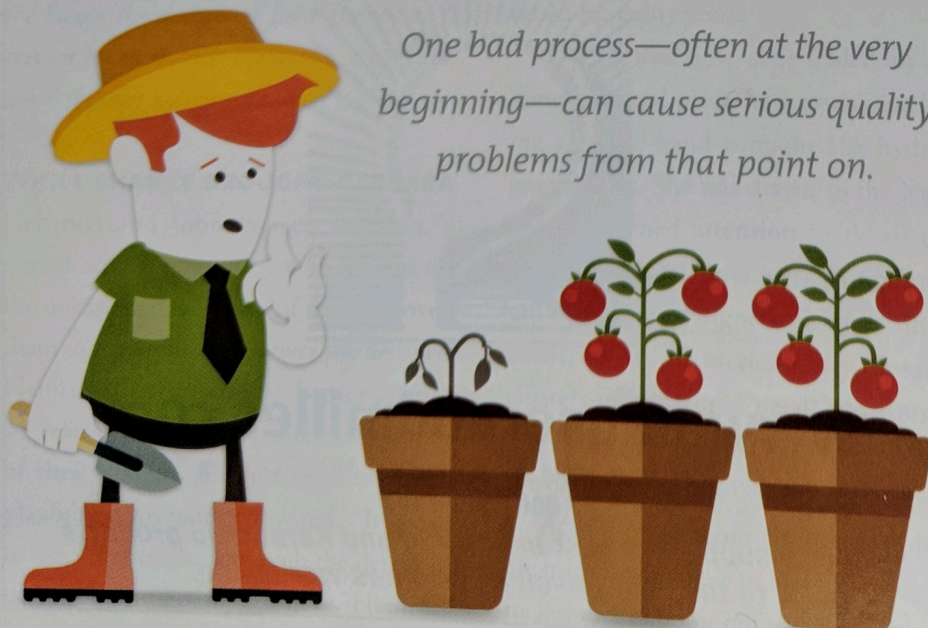
I looked at their small army of white-coated quality police, ready to search and destroy any problem they encountered, and I answered, "By not producing bad quality in the first place." All the inspection energy and standards (and costs) in the world cannot produce as good a result as not making the mistake in the first place.

So we set to work figuring out why they were overpolishing the prongs.

- Was it untrained filers and finishers? *No.*
- Was it too much porosity in the castings? *No.*
- Was it poor wax tree assembly? *No.*
- Was it poor waxes? *Bingo!*

Of course, it could have been any of those things, but the problem was in the wax room. That room was consistently too warm to maintain good wax surfaces. The problem was made worse by the fact that the wax injection techs were using "power hammers" (cotton cloths with talc wadded up in a tight ball in the middle, with the rest of the cloth rubber-banded and used as a handle) to smack the molds with talc prior to injection. The result of these problems was poor, often grainy

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wax surfaces. Poor surface equals more polishing and finishing, which equals removal of too much metal. One bad process—often at the very beginning—can cause serious quality problems from that point on.

BE CAREFUL WHAT YOU MEASURE

Another time, I was asked to work with a call center to determine why their call staff was getting such terrible satisfaction reviews by their customers. I knew it could be any of the following things:

- Hiring the wrong people
- Poor training
- Bad products leading to a barrage of unhappy customers
- Bad services leading to a barrage of unhappy customers
- Exhausted workers due to poor scheduling and planning, understaffing, or serial crises

I went digging around and found out it was none of those things. The problem was being caused by a measurement set by someone in the finance office who had never once set foot in the call center. The measurement? "Complete all calls in 2.5 minutes or less."

This was nearly impossible to do because the typical service call for this company required about twice that amount of time from even the best agents. Because the call center staff had compensation and employee reviews tied to achieving those metrics, you might imagine how everyone started rushing customers along when they called in. And satisfaction plummeted.

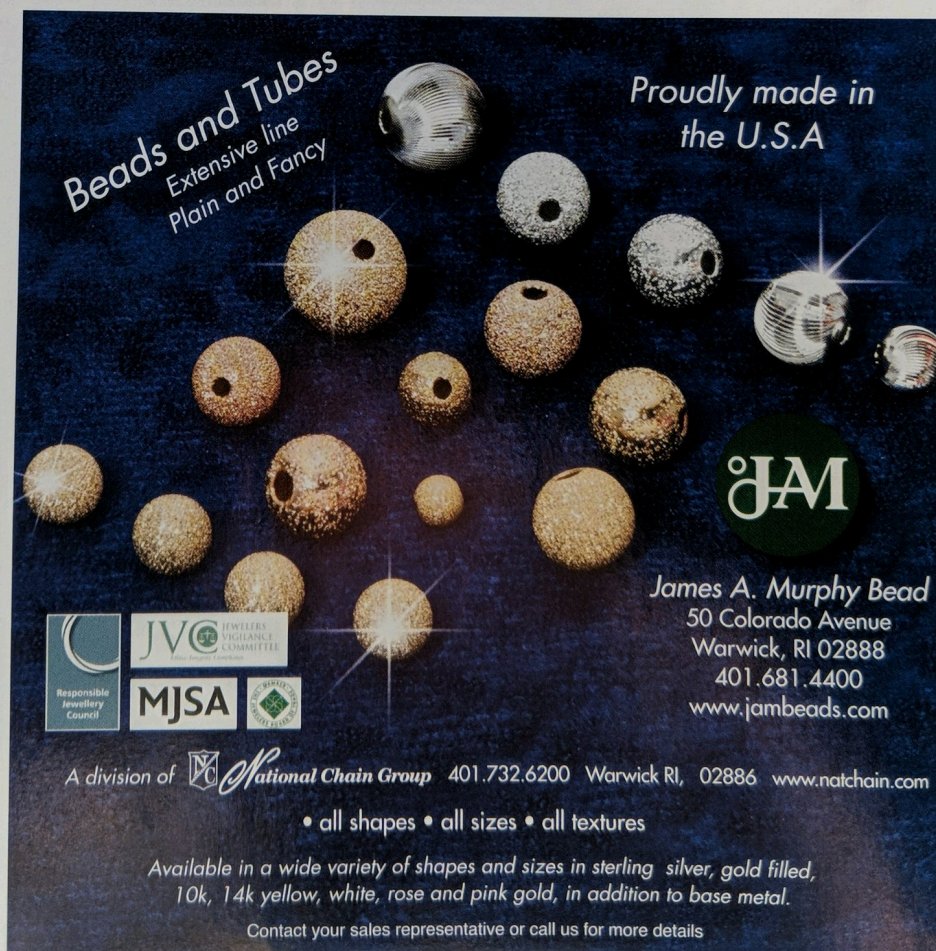
BUFFET-STYLE PROBLEMS

Sometimes a quality problem is made up of a little bit of this and a little bit of that. I find those are the most challenging to solve. I start with the problem and work backward, but sometimes no one step is a glaring problem. When that happens, I go through the steps again, this time looking for smaller problems that, when added up, lead to significant quality disappointments.

My most frustrating example of this happened with a new product development department. The design was good, but not great. The CAD renderings of the designs were good, but not exactly what the designers made. The adjust-

ments for manufacturing weren't major, but just enough to make a difference in the way the pieces looked. And the manufacturing process itself was better than average, but not top notch. Any of these small things on their own would not have led to quality problems. But added together, they resulted in constant quality challenges at the end of the production line.

If you're experiencing your own quality problems, start digging around to determine their origin and chase them back. Once you know what the soil is made of, you can look for ways to amend it. ♦



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