AGRICULTURAL ECONOMICS
Farm and Ranch Management

Managing an Ever-complex Farming Operation: 7 Types of Waste

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One common comment I get when talking to different producers is their desire to know how other operations succeed. Some operations can handle a vast quantity of acres, but no matter the size, we all face the same constraint of hours in a day. My comment to those wishing to increase profitability is that there are ways to do just that without adding more cattle or acres. Working to reduce waste within an operation is essential for efficiency. Once you are efficient at your current level, you will be more profitable and can handle future growth.

In Lean Six Sigma, a process improvement strategy, there are seven identified types of waste. Waste is recognized as anything that does not add value to the operation. In commercial industries, this is viewed as things that customers are not willing to pay for. For agricultural purposes, I view this as a task that does not increase our opportunity to make more profit. Here are the seven types of wastes to watch for in your operation.

1. **Transportation –** Transportation is any unnecessary movement of commodities or livestock. To give an example of this, consider a corn production operation. Harvesting corn could require numerous transportation points: the combine, the grain cart, tractor-trailer, auger into the storage bin, auger out of storage bin and then a final tractor-trailer to the elevator for sale. The waste is looking at this process and trying to find ways to reduce it. Grain will be damaged during each transportation instance, so reducing this will help avoid docs at the elevator and reduce the time/man-hours spent on each bushel of grain.

2. **Inventory –** Inventory for agriculture is a bit tricky. In general, having liquid capital wrapped up in raw materials waiting for use is a waste. Numerous items could be earning you a return. The problematic part is that agriculture tends to have some nuances that must be accounted for. Prepaid expenses are helpful for both discount purposes and tax purposes. The key is to take advantage of favorable prices while maintaining a level for use that is reasonable. You also need to account for the shelf life of the products being purchased.

3. **Motion –** Motion is similar to transportation, but we are looking at machinery and operators' movement. Moving machinery from farm to farm is expensive, not just in the respects of monetary costs, but also in time. Wear and tear on equipment as well as operator fatigue are issues with moving equipment constantly. Looking for opportunities to perform like-kind exchanges for ground closer to your main operation is one solution. Another factor to consider is being more efficient in travel. How much equipment is genuinely needed at a given location to accomplish the job? Also, are you leaving a job half-finished? Recording each time you move

equipment to a farm and back on a year-long summary sheet will help you visualize the situation and what might be done to make the process more efficient.

4. **Waiting –** Waiting is created when one process in a series of processes is slow. Sticking with the grain examples, think of filling a tractor-trailer from a grain bin site. One of the bins has a 6-inch unloading auger while the other bin has a 10-inch one. If the elevator does not change, how many loads per day can you get out of the 6-inch versus the 10-inch? You could also look at this from the perspective of harvest. When harvesting soybeans, how many truck drivers do you need per combine? Are there ways to reduce a truck driver's wait time?

5. **Over-production –** This is a challenging concept. In the commercial industry, it is looking at customer demand for guidance. For agriculture, we look at the futures price. The issue is the future price is ever-changing, and the goals and targets set at planting might be overvalued or undervalued come harvest. Regardless, the bottom line is the goal is to maximize profitability.

6. **Over-processing –** For agriculture, this can be looked at in many forms. On a more commercial scale, the size of a chicken matters to consumers. Larger chickens tend not to be desirable. In this situation, adding additional pounds onto the bird would be a waste. This can be the same with some field processes. For some areas, no-till and tilled ground produce the same and have similar weed control situations. Elevators do not differentiate corn grown in no-till vs. tilled ground, so does the additional cost of tilling make sense?

7. **Defects –** Defects are issues with quality that are found to be unacceptable in the marketplace. Similar to inventory, this can be tricky to describe. Looking at corn, the easy thing to point to would be the areas a commercial elevator will doc your commodity. Moisture, in this case, would be an example of a defect. Looking at the storage and harvesting practices and reworking where necessary will minimize exposure here.

These seven areas of waste can be looked at and result in additional profit or time if corrected. While not every farm can purchase ground or rent additional acres, we all can be more efficient in what we do have. One suggestion on approaching this is to have a non-farm member observe some of the processes and ask questions about why things are done in specific ways. You will find that they will become puzzled with some of your responses as they ask questions during particular processes. Those instances are areas to consider looking into to see if there are other solutions.

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