



MAINTENANCE TIPS



# Maintenance dashboard

Establishing meaningful benchmarks can make goals achievable

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Few people would set off on a cross-country trip in a car that had no speedometer or gas gauge. Drivers need to be able to monitor the operation of their vehicle to know when to slow down or to refuel. So why would a meat or poultry plant run an entire maintenance organization without some sort of “gauges” to monitor their operations?

How does a maintenance department tell if it had a good day/week/month? Is it solely judged by lack of downtime? Or, is it measured uptime? What about line efficiency? What are the right gauges, or in this case, metrics for a maintenance department?

A maintenance department is often considered effective by plant management as long as there are no major mechanical breakdowns. While the poultry industry does have the ability to slice and dice its maintenance costs and downtime via Agristats, what benchmarks does the rest of the meat industry utilize?

## Downtime: only part of the equation

Downtime is the most popular and often the most misused metric in the maintenance department. Whether mechanical downtime is attributed to

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operations or maintenance can be the subject of much and often heated debate. When a piece of equipment breaks down and stops working, the first assumption is that this downtime gets counted as maintenance mechanical

downtime. But what about those occasions when equipment breaks down because it is being operated over its rated capacity? What about employee abuse of the equipment? Shouldn't this really be considered operational downtime? It is easy to get caught up in finger pointing during situations like this, but it is vital to the integrity of the maintenance records to reflect the lifetime cost of ownership, and ultimately, to properly identify the cause of the downtime.

It is good practice after each downtime occurrence to have a quick discussion between the maintenance department and the production supervision on how the incident will be accounted: maintenance mechanical or operational mechanical. Quick huddles like this will alleviate the ‘foggy-memory syndrome’ of trying to figure out at the end of the day (or week) which downtime was the responsibility of the maintenance department and what was the responsibility of production department.

### Quantifying costs

The next most obvious metric is maintenance cost. There are quite a few methods of measuring maintenance costs. There is cost per pound, cost per cwt, cost per head, cost per bird, cost per case, etc... Then there is the whole issue of what goes into the “cost” of maintenance. Usually, the cost is broken out into the cost of labor (with benefits) and the cost of parts.

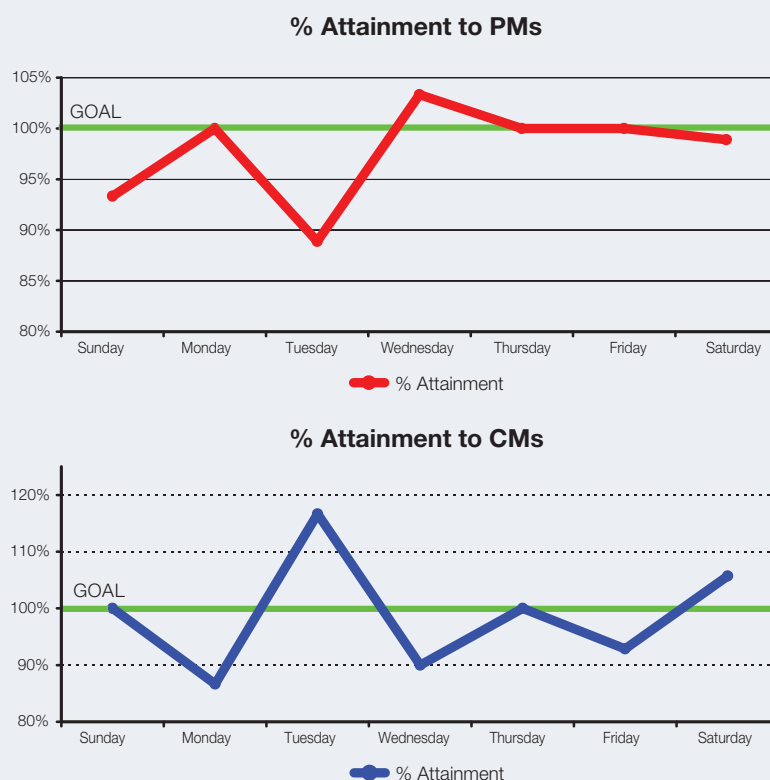
How plant operators decide to measure labor needs to accurately reflect the cost of maintenance disregarding seasonality or cyclical production fluctuations. Head or birds per maintenance man-hour (on a weekly basis) or cost per cwt would both be practical methods for measuring labor effectiveness. This would provide a much clearer picture for the maintenance manager to deploy labor accordingly. It is also necessary to have proper procedures in place for management approval of overtime to control labor costs.

The cost of parts necessitates further breakdown into the cost of parts for preventive maintenance work orders (PMs), the cost of parts for corrective maintenance work orders (CMs), the cost of parts for project work (usually capitalized) and the cost of parts for emergency repair work orders (EMs). Separating the parts costs in this manner will provide a clear picture of true costs, especially regarding the lifetime cost of equipment. This will also begin to clearly define the true cost of a well executed preventive maintenance plan vs. the cost of repairs and downtime.

Another common metric associated with the cost of parts is the average inventory cost of maintenance, repair and operations (MRO) parts. Deciding the proper inventory levels and expected inventory turns of the multitude of parts required to keep facilities running appears to be a complex process. However, keeping a close eye on expedited shipping costs can assist in setting proper reorder points. It is one thing to have to pay expedited shipping to get a part to a location on time if it is a rarely used, non-critical item. It is quite another

Figure 1

### Maintenance Work Order Dashboard



to incur expedited shipping charges for commonly-used belts, gaskets, hoses or electrical components. A weekly review of expedited shipping charges is part of proper maintenance management.

### The value of prevention

Another important metric is the ratio of PMs issued vs. the PMs completed on a daily and/or weekly basis should be a metric. The same holds true for CMs and EMs. These would reflect a percentage of attainment to scheduled work. For example, if 100 PMs are issued on a given day and only 80 PMs are completed, an 80-percent attainment would be recorded.

These metrics form gauges or Key Performance Indicators (KPI's), which can be used to create a “dashboard,” giving maintenance management a daily and weekly snapshot of operations. By creating simple graphs (see Figure 1 for examples) to chart the percent attainment to scheduled work, operators could place a gauge for each of the

KPIs (PMs and CMs). This same idea could be carried over to costs, both labor and parts. These would require setting goals for each of these KPIs. Goals for the poultry industry can be established using Agristats results as benchmarks. Otherwise, goals can be established by monitoring actual results for a few months and creating a goal slightly above the current results.

While this all sounds like a lot of work, most of the effort is expended in setting up the Key Performance Indicators. Once they are set up, maintaining them is only nominally time consuming and the benefits can be substantial. Creating a dashboard of gauges will make the ride in the maintenance department a lot smoother. **M&P**

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