Dairy data for dummies

Brian Stampfl, DVM
Valley Veterinary Clinic
Seymour, WI 54165

Abstract

Utilizing data and records generated on dairy farms is an essential part of modern dairy practice. Many young veterinarians have been exposed to basic records analysis, but may still lack some skills that improve their ability to add value for clients. Learning these skills requires a dedicated effort, and there are many resources available to the young practitioner. This presentation aims to outline a process by which young practitioners can improve their skills with some of the most commonly used data analysis tools.

Key words: data, records, dairy

Introduction

There are many functions that electronic records serve on modern dairy farms. One way to broadly categorize these functions is that they either help in the day-to-day management of the dairy, or that they aid in the analysis of the performance of the dairy. Management functions include keeping track of individual animals, logging treatments, running lists for important management tasks, and many others. Analysis functions allow the dairy stakeholders to understand how the dairy is performing with regard to milk production, cow health, milk quality, herd turnover, etc. These roles of course feed into one another, and both are essential for the young practitioner understand. This knowledge, combined with good client communication, can motivate positive change on dairies.

Gaining proficiency

Developing skills in dairy records analysis takes a dedicated effort. There are a number of different management software platforms being used on dairies, as well as several different spreadsheet programs and programming languages that one could potentially use to analyze farm data. The tools used will be dictated primarily by which ones most clients are utilizing and the veterinarian's comfort level with data in general. Due to their ubiquity, this presentation will highlight the use of DairyComp 305[a] and spreadsheet tools such as Microsoft Excel and Google Sheets.

Building skills: DairyComp 305

Getting started can be challenging, and there is a relatively steep learning curve for someone with no familiarity. Fortunately, developments made in the last few years have made accessing data much easier. One example is the Pulse Platform[b], which provides cloud-based access to farm records. Veterinarians can create a profile and be added to specific dairies as veterinary consultants. Once added, you will have access to many pre-made reports that highlight important aspects of the dairy. If there is a report that you would like to replicate, the command used to make it is often found in the bottom right corner of the report or chart.

When using the on-farm version, the GUIDE command provides many ready-made reports as well. These reports can be used even if they are not exactly correct right away. To edit a GUIDE command to fit your specifications, simply exit GUIDE after running the command, use the ACTIVITY tab to find the last command run, and double click. This will put the command in the command line and you can edit from there. This is a highly efficient way to get important information.

If you are looking to write more complex commands, utilize the Reference Guide under the Help menu. This is the "owner's manual" and essentially anything you need to do will be described in it. For example, it is especially useful for finding switches that control the behavior of commands. Learning in this way takes time and experimentation (and probably some failure), but will lead you to a much deeper understanding of the program.

Building skills: Spreadsheets

Spreadsheets can be an invaluable part of data analysis workflows. In addition to their usefulness as partial budgeting tools, they have the capability to quickly process, summarize and present relatively large amounts of data. Because not every analysis you would like to conduct is readily done in farm management software, learning to use these tools is essential.

One example of functionality that saves a lot of time and effort is the use of pivot tables. Pivot tables are a tool used to aggregate, summarize and visualize tabular data. It is exceedingly difficult to explain how to use pivot tables in print, but there are many online resources available. Free content is available online, and detailed online courses are available on sites like EdX[c] and DataCamp[d]. These courses are either free or low cost, and are highly recommended for improving your skills.

The important part: Communication

There is no doubt that improving your skills in records analysis is critical to food animal practice. However, there is no use doing any sort of analysis, monitoring or reporting if that information is not communicated well. The process is analogous to making a diagnosis and treatment plan for an individual animal. As a veterinarian, you work through a process to examine the animal and select appropriate diagnostic tests to arrive at a diagnosis. What happens next is most important. Working with the client, you translate medical terminology into something more easily understood, clearly state your recommendations, and allow the client to make a decision. When working with data, you need to learn to do the same.

Start with a good understanding of your clients, their goals and their motivations. You will undoubtedly have clients that are always pushing themselves forward. These sorts of clients are early adopters of technology and value the sort of records analysis you can provide. Other clients have obvious areas of opportunity, and on the surface do not appear to have much motivation to pursue them. You will encounter more difficulty convincing these clients to change things. Always remember, though, that if you are in private veterinary practice, you work in customer service. Build solid relationships and demonstrate your competence, and when opportunities arise, pursue them.

When analyzing records and reporting, also remember that each person prefers to receive information differently. There are those who prefer very detailed reports so that they can make their own interpretations. These people will challenge you to improve your skills and may scrutinize your work. There are others who would prefer not to ever look at a table or chart. They would prefer you make your own interpretation and tell them what it is. Knowing how best to communicate your findings will make your work as impactful as possible. The best, most thorough analysis can fail to motivate change if not presented properly.

Unfortunately, there is probably no online course for making compelling arguments to farmers. Those skills are developed over time while working day-in and day-out with clients. It takes trust for someone to allow you to make treatment decisions for an individual animal, and that gets amplified if they are allowing you to help make decisions about their livelihood. Remember this when providing recommendations based on records analysis. If you take the time to cultivate trusting relationships with your clients, they are far more likely to consider you an asset to their operation. When that happens, you can utilize those data skills you've worked hard to develop.

Endnotes

[a] DairyComp 305, VAS, Visalia, CA
[b] Pulse Platform, VAS, Visalia, CA
[c] EdX, Harvard University and Massachusetts Institute of Technology, Cambridge, MA
[d] DataCamp, New York, NY