

One for the record books

A Dairy Certificate of Death can help farms better track and understand on-farm losses.

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THE CERTIFICATE OF DEATH includes valuable information that can be used in the future to make cow care changes.

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UNDERSTANDING why cows die on-farm is important. For a producer who takes seriously the value of understanding cow death losses as a tool to monitor cow health and risk of disease on the farm, there is still a missing element in tracking the cause of death. This is a record system that collects meaningful information that can be used to improve management in the future.

Current dairy record systems provide an opportunity to list cause of death. But the causes that are identified and listed suffer from several liabilities. First is the accuracy of the information. This can be corrected with more thorough investigation, including necropsy. Second is the type of category that is used in current records. Categorizing a death as “respiratory,” “digestive,” or “reproductive” provides limited information for later analysis.

If you have taken the time to really investigate causes of death, you will want to be able to track that information to see if similar problems occur frequently. For example, if numerous different issues can ultimately be attributed to problems with dystocia, this would prompt you to review delivery protocols and improve worker performance in the maternity pen. Similarly, if numerous cows have a disease identified but fail to respond to treatment, you should be asking whether disease identification, treatment protocols, and follow-up monitoring are conducted appropriately.

Make it official

We need data systems that capture information available at the time of death and code it in a way that makes sense for monitoring purposes. The human medical community dealt with this problem many years ago as they tried to monitor causes of death in human populations. Their efforts developed death certificates that have been used for well over a century.

These documents combine information about a proximate cause of death, commonly including autopsy information or results of other diagnostic testing. They also include historical information about the individual to help deter-

mine the underlying cause of the death.

We have adapted this method for use on dairies. The person evaluating the death can enter information and walk through steps of investigation that helps them determine the most likely reason the cow got sick with a problem resulting in death. The process is relatively simple but relies on collecting information that is most easily assembled near the time of death.

Cracking the code

The death certificate form establishes who the cow was and some details about its life in the herd. It asks about previous health problems and treatments. These types of details provide a reasonable assessment that the investigator can use to formulate ideas about why this cow developed the problem that either killed her or led to the decision to euthanize.

The idea behind the death certificate is not that there is 100 percent certainty about cause of death — that would be unrealistic. Rather, it prompts the dairy worker and/or the herd veterinarian to become more aware of the specific risks and likely problems that end up with a bad outcome. Some of the requested information comes from dairy records, while other data come from the people working with the cows.

This process promotes much more interaction between the veterinarian and the workers on the farm who deal with animal health. In our experience, having workers become more involved with health processes and communication about health events leads to much more knowledge and information about how to keep cows healthy. Commonly the process of doing a necropsy and pursuing answers generates worker questions about disease identification and treatment, very positive ways to influence health care.

Once the underlying cause of death has been established, we use an alphanumeric coding system that includes eight letters so that it can fit in computerized dairy record systems. This system identifies a target area for preventive interventions, distinguishes euthanasia from death by natural causes, identifies whether a death certificate was filled out, lists the disease that was the proximate cause of death, and describes the underlying causative problem.

Using this coding system does not require that a necropsy is performed, but in many cases

it emphasizes why a necropsy would be useful. The code makes it easy to determine how many cows died for specific reasons while providing much more information than current records. Again, this heightens awareness of specific risks on the dairy that can produce bad outcomes.

The first two letters in the code represent a specific disease problem or problem area that can be managed for improved outcomes. Such problem areas include calving trauma, injury due to human error, transition cow problem, and so on. If a records’ review shows numerous cows that died due to these “problem areas,” then decisions can be made to help minimize that cause of disease and death.

Dig into the details

For the proximate and underlying causes of death, which identify the specific problems found by testing, necropsy or inquiry, we have established 38 different two-letter codes. Therefore, the diagnosis of death can be far more specific than the current record systems that abbreviate a term for an organ system, such as “resp” or “digestive.”

We laminate the sheets with the coding key and have them available on-farm with the certificates of death to make the process very easy. We have made these forms available on our Integrated Livestock Management website so that you can download or print them out easily. The ILM webpage is at www.cvmbs.colostate.edu/ilm/. The site containing the Certificate of Death, the Mortality Record coding system, and a necropsy data collection form is at: www.cvmbs.colostate.edu/ilm/projects/mortality.html.

We suggest the Certificate of Death is kept in a hard copy filing system so it can be reviewed later. The coding system makes searching for information from computerized records simple.

We recommend that producers review mortality records with their veterinarian on a routine basis, as they would any other indicator of herd performance and herd problems. This way, improvements can be made in an ongoing fashion. 🐄

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