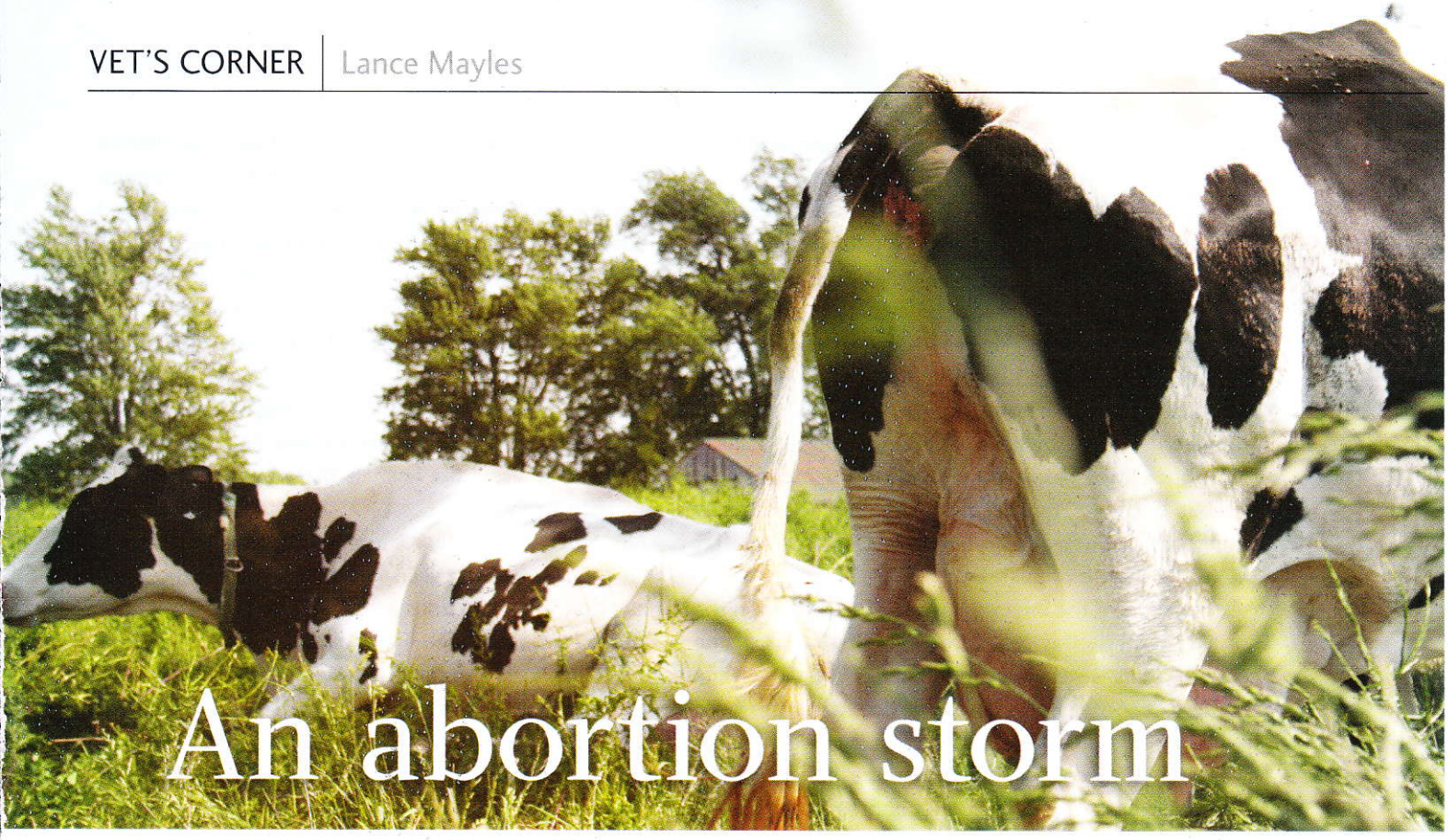

An abortion storm

A farmer gets a lesson in the value of maintaining vaccinations when an IBR virus strain arrives on the farm

"CAN YOU COME OUT and take a look at my cows, I've had six abort since Wednesday." My partner took the call on Labour Day 2008, then went out and examined Farmer Jim's herd.

Her initial examination didn't seem to indicate what the cause could be. The cows all appeared to be in excellent condition, and showing no signs of illness.

Farmer Jim indicated that the cows would appear to be completely normal, and then the following chore he would go out and find a fetus behind one. This morning two first lactation heifers had aborted.

Dr. Dancho performed post mortem exams on the two fresh fetuses, and collected samples to be submitted to the provincial veterinary laboratory for further testing. This had been a closed 70-milking-cow tie-stall herd for several years. Recently, three heifer calves had been purchased, but they were being housed in a separate building. They all appeared to be healthy. Breeding age heifers were housed on a separate farm, and brought to the main barn as springers.

The following morning I arrived to perform our regularly scheduled herd health. After completing the pregnancy exams, we decided to further investigate the abortion problem.

The herd had been vaccinating with a J-5 bacterin to help successfully reduce toxic mastitis, and the aborting cows had been done a month previously. There had been a recent feed change to a new haylage, which on inspection did contain some mold around the edges. The owner hadn't noticed any change in the cows appetite for their TMR, and herd milk production was holding steady at 31 kg per cow.

Preliminary concerns centred around the moldy feed as a potential culprit, and the suggestion was made to incorporate a mycotoxin binder in the TMR. We moved on to individually assess the cows that had aborted to see if we could find any other clues. As we collected blood to test for neospora and leptospirosis titres, I noticed that all of the affected animals were first calf heifers.

They had all calved during the fall of 2007, and had been pregnant between 132 days and 237 days when they aborted. They all appeared to be in perfect health. We were stumped as to what may have been

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going on, and waited for the results to come back from the lab.

Test results started to trickle in over the next few days, the cows were all negative for neospora and had low (negative) titres to leptospirosis. The submitted fetuses were negative for bacterial pathogens, mycoplasma and ureaplasma. However they were able to isolate Infectious Bovine Rhinotracheitis Virus (IBRV) as the cause of the abortions.

Different strains of IBRV can cause various clinical signs, such as a respiratory syndrome ("red nose"), nervous disorders, or infertility. The abortion strain is genetically distinct, and typically causes abortion after the fourth month of gestation.

Other signs of the infection are seldom evident in the cow. What made this case interesting is that all of the affected animals were first calf heifers. When reviewing the herd records in this case, I noticed that this herd had been following a recommended schedule of vaccinating all fresh cows and prebreeding heifers with a modified live virus (MLV) product containing IBR, BVD, PI3, and BRSV.

This had been in place for several years, but the owner had elected to stop vaccinating in July of 2006 in order to save costs. The animals that had aborted were the first group that had not received the four-way viral protection.

Additionally, it seemed that all of the mature cows appeared to have been protected against the abortion strain of IBR, even though it had been at least two years since they had last received the vaccination.

Armed with the lab data, we immediately vaccinated all of the open cows with a modified live viral product. Bred cows and heifers were given a killed product and boostered. We reinstituted the modified live vaccination program to groups of animals after freshening (with plans to back it up into the dry cow period once all animals have received at least one dose of MLV vaccine).

Later in the fall, we reconfirmed pregnancies on the entire herd, and found another two first calf heifers (same group as all the animals that aborted) that had mummified calves.

No other age group was affected, and we suspect that the mummified calves likely died around the same time that the abortions were occurring. There have been no additional abortions in the eight months that have followed. We weren't able to confirm the source of the virus, but suspect it may have come in with the calves purchased in August.

Though housed in a separate building, boots and coveralls were the same between the calves and the main barn. Having the bred heifers housed on a separate farm likely protected them from the "abortion storm" that could have been much worse. In the animals that aborted, four of them were rebred in October and are in calf. One was eventually culled, and another has been rebred several times and is still not confirmed pregnant.

Farmer Jim is now convinced of the value of maintaining a herd vaccination program.