For Immediate Release

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Several factors affect abortion frequency in U.S. dairy herds

VERONA, Wis. (October 10, 2008) – Using Dairy Herd Improvement (DHI) data, U.S. Department of Agriculture Animal Improvement Programs Laboratory (AIPL) researchers examined factors affecting the frequency of dairy cattle abortions. In research just released from AIPL, these researchers used data submitted with DHI termination codes of “8,” and pregnant more than 152 days. The DHI data set AIPL used contained 28,272 herds and nearly 3 million lactations.

The abortion rate was highest at 152-175 days of pregnancy. Overall, the abortion frequency was 1.51% for the data analyzed. Estimated average abortion differences across lactation declined by 0.57% from first calf heifers to eighth or greater lactation cows. Research has indicated the likelihood that abortion declines with advancing lactations. Younger cows’ higher abortion rates may be due to less acquired immunity to infectious agents. The average abortion rate was highest in the earliest stages of pregnancy and lowest for cows pregnant 224-250 days.

Abortion rates also followed seasonal patterns, with July as the highest month and December the lowest month for reported percent abortions. The six-month period of February through August saw the highest abortion rates and the six-month period of September through January saw a lower rate. Spring and summer may favor the spread of infectious agents that cause abortion in dairy cattle.

Higher milk production cattle groups experienced higher abortion rates across all breeds. While small, researchers noted breed differences. Holsteins’ abortion rate was 0.19% higher than other breeds. Increase in herd size seemed to favor an increase in abortion frequency as indicated in Figure 1. It was estimated that small herds (50-99 cows) had nearly 1% fewer abortions compared to herds with 700-799 cows.

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Figure 1.

![Graph showing relationship of herd size and abortion percentage. The x-axis represents herd size categories (50-99, 200-299, 400-499, 600-699, 800-899, 1,000+), and the y-axis represents percent abortion. Different herd size categories have varying levels of abortion percentage, indicating a trend.]

When looking at geographic differences, AIPL researchers found that California had the highest cattle abortion rate and North Dakota had the lowest. California’s abortion rate was 2.2% more than North Dakota’s, across all lactations.

From other studies using ultrasound during early pregnancy, it appears that losses may be even larger prior to 152 days (minimum recorded in DHI). Thus, documentation of abortions from DHI recordings are likely underreported and may warrant development of an additional coding system to pick up the early ones, because they obviously have big economic consequences.

National Dairy Herd Information Association, a trade association for the dairy records industry, serves the best interests of its members and the dairy industry by maintaining the integrity of dairy records and advancing dairy information systems.

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