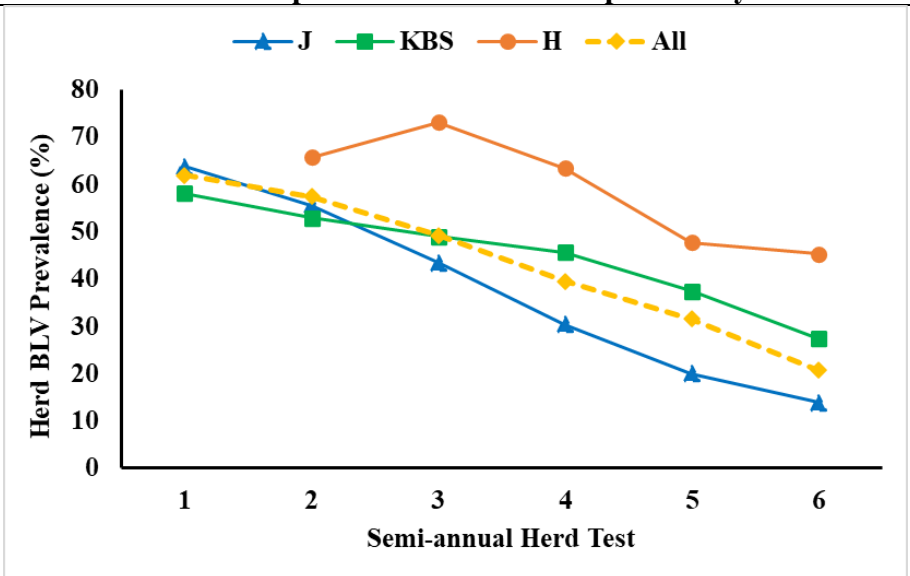
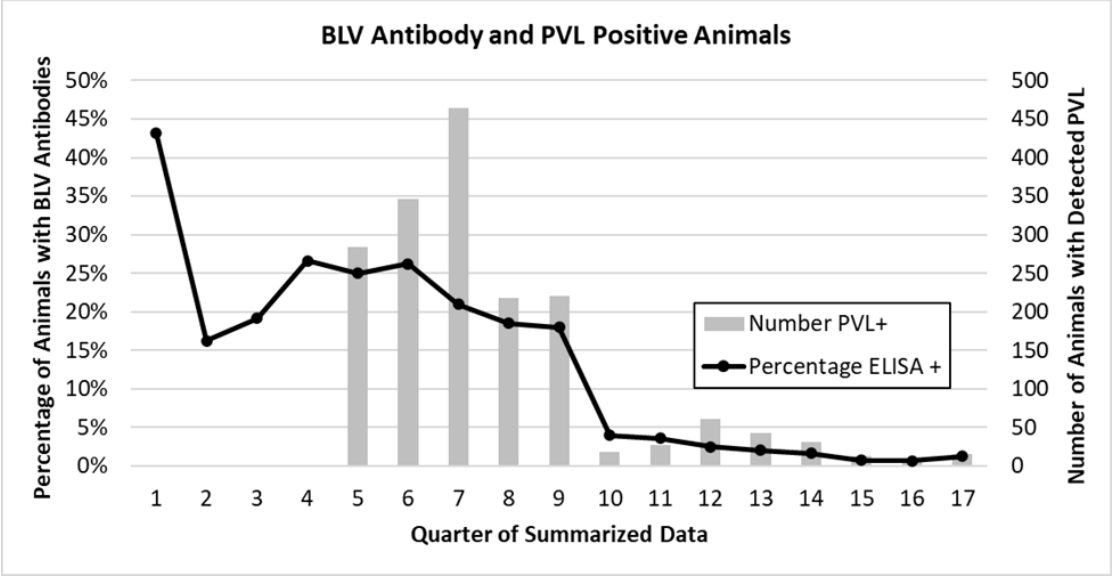
Figure 1: Decrease in herd BLV prevalence in a 3-herd pilot study



Decrease in herd BLV prevalence over semi-annual tests among 3 dairy herds (J, KBS, and H) that culled or segregated cows with the highest BLV proviral load (PVL).

Reference: Ruggiero VJ, Norby B, Benitez OJ, Hutchinson H, Sporer KRB, Droscha C, Swenson CL, Bartlett PC. (2019) Controlling bovine leukemia virus in dairy herds by identifying and removing cows with the highest proviral load and lymphocyte counts. *Journal of Dairy Science* 02(10):9165-9175.

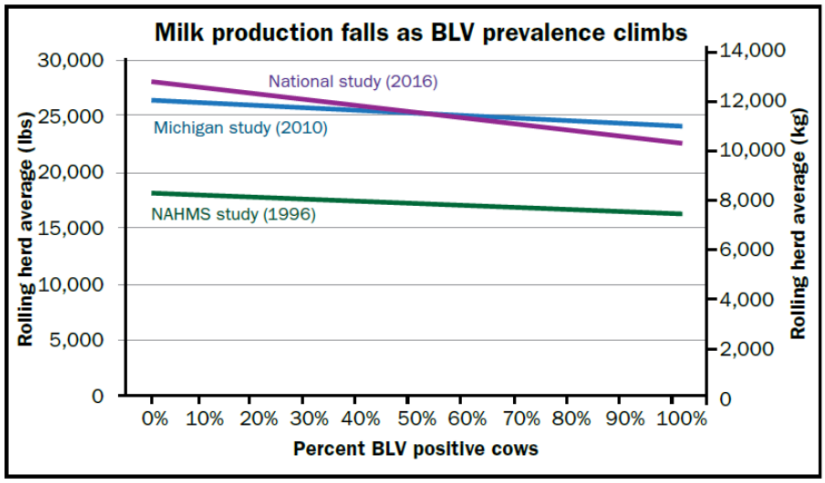
Figure 2: Decrease in herd BLV prevalence in a large 3,000 cow pilot study



BLV was controlled by selectively culling or segregating cows with the highest BLV proviral load (PVL). In 4 years, the percentage of BLV ELISA-positive cows declined and the number of cows with detectable BLV PVL was eventually reduced to zero in the following year not shown.

Reference: Taxis TM, Harbowy RM, Niles D, Sporer KRB, Bartlett PC. (2023) Controlling bovine leukemia virus in a large dairy herd by selective culling based on diagnostic testing. *Applied Animal Science* 2(39).

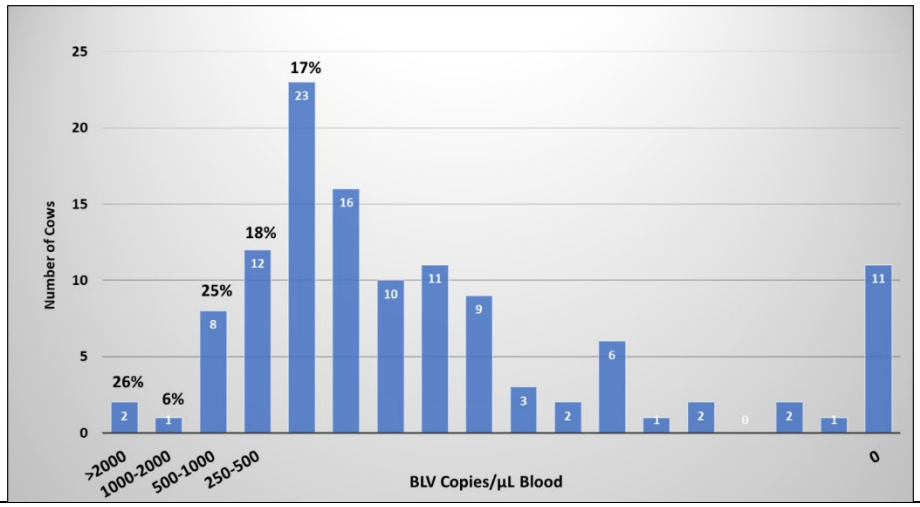
Figure 3: Comparison of BLV herd prevalence to rolling herd average milk production



Milk production rolling herd average decreases as the percentage of herd bovine leukemia virus (BLV) ELISA-positive animals increases. Similar results were reported in three separate studies.

References: (1) LaDronka RM, Ainsworth S, Wilkins MJ, Norby B, Byrem TM, Bartlett PC. (2018) Prevalence of Bovine Leukemia Virus Antibodies in U.S. Dairy Cattle. *Veter. Med. Int.* 2018:1-8. (2) Erskine RJ, Bartlett PC, Byrem TM, Render CL, Febvay C, Houseman JT. (2012) Association between bovine leukemia virus, production, and population age in Michigan dairy herds. *J. Dairy Sci.* 95:727-734. (3) USDA Bovine Leukemia Virus (BLV) on U.S. dairy operations. (2017) Available at https://web.archive.org/web/20190205034903/https://www.aphis.usda.gov/animal_health/nahms/dairy/downloads/dairy07/Dairy07_is_BLV.pdf (Accessed 4 February 2019).

Figure 4: Example of whole herd BLV distribution and infectiousness summary



A provided example of the figure provided during MSU BLV Research and Extension team consultation meetings with producers engaged in BLV control programs. The BLV proviral load (PVL) is provided as a estimate of BLV Copes/µL Blood, with a higher value indicating a higher level of infectiousness. The percentages above the bars indicate the percentage of animals with viral shedding, a route of transmission. For example, 26% of the viral shedding on the example farm is coming from 2 cows.

No reference available, figure is an output for individual producer education and discussion.