Collection of Bovine Urine for Diagnosis of Leptospirosis

- **Selection of animals for testing**: Generally, analysis of samples from 15 cows is sufficient to detect leptospirosis. We advise the testing of 15 samples/herd, because this provides a 95% chance of having one sample positive if the herd prevalence of infection in ≥20%. Testing smaller numbers of animals will result in a decrease in confidence of negative results. The particular animals that are selected for testing are not particularly important although some choose to bias the sample towards certain groups of animals, e.g. problem breeders, bulls, etc.

- Ideally, urine should be collected after administration of a diuretic (e.g. furosemide). The objective is to collect urine that is freshly produced. The usual procedure is to inject 5 to 10 cc of furosemide IV or IM and wait for about 10 minutes to collect a urine sample. The cow will have emptied her bladder once by that time and the urine you collect will be freshly produced. Clean the vulva of gross debris with a wet paper towel, collect 5-10 ml of urine in a sterile, leak proof container. Please do not send samples in whirl pack bags—they leak!

- In circumstances where it is not practical to collect urine with the use of a diuretic, midstream samples can be collected after cleaning the vulva as above. Collect 5-10 ml of urine in a sterile container. Please do not send samples in whirl pack bags—they leak!

- Chill the samples but do not freeze them. They should be shipped with ice packs by overnight mail or 2nd day air along with the appropriate submission forms on the DCPAH CD or website to: Diagnostic Center for Population and Animal Health, 4125 Beaumont Rd., Lansing, MI 48910-8788. Request that the samples be tested by ‘Leptospira PCR’ (95052). Consult the web site for the latest fee schedule. Please list the animal numbers on the submission form or an attached piece of paper.

- **If the test is positive**, i.e., *Leptospira* DNA is detected in the urine, it is not possible to definitively identify the infecting serovar. The most practical way to indicate the infecting serovar is using serology. Therefore, you may wish to consider also sending serum from the same cows from which you collected urine. To have serology performed on all animals submitted, please request “Leptospiral Antibody” (95040). Consult the web site for the latest fee schedule. Aseptically collect blood in appropriate vacutainer tube. Centrifuge to separate serum from the clot. Transfer serum into leak proof tube. Refrigerate sample until shipment.

- Alternatively, you may request that we only test the serum from the animals with positive urine. In this instance, you will only be charged for the serology on those animals. All other serum samples will be held for up to one month in lab and then discarded at no charge. To request this, please write “Serum if Positive”, “SIP”, or 95995 clearly on the submission form. Consult the web site for the latest fee schedule. Aseptically collect blood in appropriate vacutainer tube. Centrifuge to separate serum from the clot. Transfer serum into leak proof tube. Refrigerate sample until shipping.

- We accept deliveries of samples Monday through Saturday, excluding national holidays.