A.I. Boar Semen Quality Control

1. Now that A.I. has become more common, it’s important to maintain good quality control procedures, especially in techniques and procedures
   a. This can be done by observing collection and extension techniques and also by examining semen after extension

2. The best indicator of semen quality is the acrosome evaluation
   a. The acrosome is the coating of the head of the sperm cell
   b. The enzymes in the acrosome are critical for the attachment of the sperm cell to the egg and penetrating the egg wall to fertilize
   c. If the acrosome becomes damaged. Even though the sperm cell may look normal and is motile, it will not be able to attach itself to the egg

3. There are several tests that can be done to evaluate acrosomes
   a. Phase Contrast Microscopy
      • One of the quickest and least expensive tests
      • Used to evaluate whether the acrosomes are normal or not
   b. Osmotic Resistance Test
      • Evaluates the effect of osmotic pressure on the acrosome
      • ii. If the acrosome remains normal, the boar is producing excellent quality semen and can be used for semen pooling and adjust dosing rates to that specific boar

4. It is recommended to examine new boars before they are sued and follow up with monthly examinations
   a. If a particular boar has erratic collections or health problems, it may be important to evaluate more frequently

5. Swine Vet Center has the necessary lab equipment and trained personnel to evaluate acrosomes. Tests on semen samples can be run for anyone who is collecting boars for further extension and use in an A. I. program
   a. Call ahead to line up a time for the evaluation of semen does
   b. Doses need to be sent by overnight delivery or dropped off at the clinic
   c. Shipping
      • Doses should be sent in a Styrofoam cooler
      • Along with the semen doses, place a gel pack that has been cooled in the kooltron (not freezer) to maintain proper temperatures
      • Keep one of the doses from the collection in your kooltron for comparison if there are problems in shipment