



# Artificial Insemination (AI) Checklist

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## Before the Breeding Season

- ☐ Prepare an inventory of semen and plan mating decisions for heifers and cows.
- ☐ Check liquid nitrogen level of tank and schedule refill before start of the breeding season.
- ☐ Begin purchasing semen from a reputable supplier and store in liquid nitrogen tank.
- ☐ Plan AI protocol for heifers and cows (<http://www.iowabeefcenter.org/estrussynch.html>).
- ☐ Order AI and synchronization supplies (hormones, sleeves, sheaths, patches).
- ☐ Document semen locations by canister in the semen tank.
- ☐ Plan prebreeding vaccinations for cows/heifers and bull breeding soundness exams.
- ☐ Body condition score cows and adjust rations accordingly to hit target.

## Synchronization and Heat Detection

- ☐ Set up facilities to handle livestock multiple times during synchronization protocol and breeding.
- ☐ Implement synchronization protocol with special attention to timing and drug dosage based on product.
  - \*Using BQA injection guidelines, hormones should be administered intramuscular with 1.5-inch needle.
- ☐ Spend at least 30 minutes twice a day detecting for estrus if breeding with heat detection protocol.
- ☐ Inseminate 12 hours after onset of standing heat (heat detection only). Breed using the AM/PM rule.
- ☐ Insemination timing will differ based on Fixed Time AI protocols and when using sexed semen.
- ☐ Arrange multiple trained inseminators to be available on breeding day when synchronizing a large group.

## Time of Insemination

- ☐ Locate nitrogen tank, warm water or thaw unit, and breeding kit near the cow and out of direct sunlight.
- ☐ Using low stress cattle handling, bring cow up and restrain in a breeding chute.
- ☐ Identify mating and locate semen in the tank using the inventory sheet.
- ☐ Thaw semen in 94-98°F water for at least 45 seconds. Warm insemination gun to body temperature.
- ☐ Protect semen from sunlight and temperature fluctuation.
- ☐ After thawing semen, dry the straw with paper towel, flick semen away from crimped end.
- ☐ Cut end of semen straw with scissors and load semen into sheath and warmed AI gun.
- ☐ Keep AI gun warm in a warmer or against body in a warm area until it is inserted into the cow.
- ☐ Put on sleeve, take paper towels and lubricant to chute.
- ☐ Follow correct insemination procedures and deposit semen in uterine body within 15 minutes.
- ☐ Administer hormone if using a Fixed Time AI breeding protocol.

## After Insemination

- ☐ Check sire information on semen straw, record in breeding records and update inventory.
- ☐ Clean insemination equipment and store for next use.
- ☐ Move animals within 4 days of breeding or wait 42 days after breeding to minimize potential embryo loss.