Excellence

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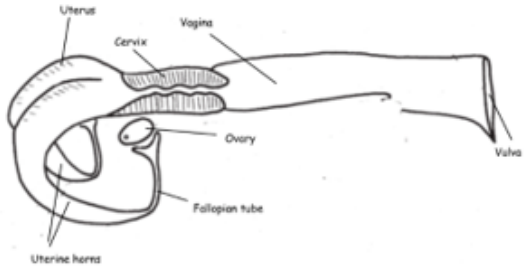
Reproduction is an essential life process in life to increase the numbers of offspring either through asexual or in the case of deer through sexual reproduction. The importance of reproduction in deer is that it ensures the genetics, so the farmer has replacement stock for breeding or selling for venison for meat, velvet for traditional medicine, and antlers for export. Proper management of deer reproduction can help to reduce inbreeding, maintain genetic diversity, and minimize the risk of disease transmission within the herd. Manaakitanga refers to the practice of caring for and respecting others, and in return, they will reciprocate. Manaakitanga is linked to reproduction and the management practice of AI by emphasizing the importance of caring for the deer, and ensuring their well-being, allowing farmers to improve the breeding process so the deer will provide quality products in return. This is especially important during the reproduction process, as it can be a stressful and challenging time. By providing proper care and attention to the deer ensures a successful breeding process and improve the overall health of their animals.

A management practice that effects reproduction is artificial insemination (AI). AI involves the collection of semen from a male deer and the insertion of that semen into a female deer's reproductive tract to achieve fertilization as shown in the diagram. The first step of AI is heat detection, this is the process the farmer does to determine whether the hind is ovulating. A deer farmer only gets a small window of ovulation to inseminate the hind. If this opportunity is missed the farmer will have to wait for the next cycle. Next is to sterilize and prepare the equipment, this is to ensure no bacteria gets dragged into the reproductive tract. Thawing semen straws makes the sperm ready for fertilization. The next step is to wipe the vulva and insert the AI rod into the vagina at a 45-degree angle. This is to protect the internal structure of the vagina. An arm is then placed into the rectum to locate the cervix. This is so the rod does not damage the cervix and is not inserted too far. The semen is deposited into the body of the uterus to increase the chance of pregnancy.



AI enables farmers to pick stags with favorable genetic traits and utilize their semen to inseminate hinds. This can result in offspring with better genetics, like faster antler growth rates, higher venison or velvet quality, or other desired traits. Farmers will increase the production efficiency of their mobs by selecting superior genetics using semen from high-quality stags, even if those stags are not physically present on the farm, increasing the number of offspring that can be generated from a single stag, resulting in more efficient utilization of resources. In natural mating, a single stag will generally mate with 8-12 hinds, this is a large contrast from AI where a much larger number of hinds can become pregnant. AI influences the reproductive life cycle of deer by allowing for better regulated breeding and the selection of superior genetics which increases farmer revenue by increasing productivity and profitability. If hinds do not breed in a timely manner or produce too few offspring, it can delay the age at which the animals reach optimal harvest weight and size. AI can provide better regulated breeding by allowing farmers to control the timing by selecting when to inseminate hinds to have greater control over the timing of fawning. This is useful for farmers who wish to time their births for certain times during the season or meet market demands. AI can lower the chance of animal injury or stress during breeding, which enhances animal welfare.

AI is a management practice that has both strengths and weaknesses for deer farms in NZ.

Strengths:

- AI allows deer farmers to use semen from stags that are not physically present on the farm to introduce new genetics, increasing genetic diversity in the herd.
- By selecting superior genetics, farmers can produce offspring with desirable traits such as improved growth rates, meat quality, or antler production.

- AI allows farmers to have greater control over the timing of breeding and can reduce the risk of injury or stress to animals that can occur during natural breeding.
- AI can increase the number of offspring that can be produced from a single stag, which can lead to more efficient use of resources, increasing profits.

Weaknesses:

- AI can be expensive, as it requires specialized equipment and expertise.
- AI requires specialized skills and knowledge required by a vet.
- Conception rates for AI in deer are lower than those for natural breeding, which can reduce the effectiveness of the technology.

The reproductive life process of deer can have a significant effect on meat and velvet production on deer farms in NZ. The manipulation of reproduction is critical in determining the productivity and profitability of deer mobs. Hinds must be bred each year to produce fawns for meat or velvet. The reproductive efficiency of the herd can have a direct impact on the number of offspring produced and the timing of their growth. AI is an important management practice for deer farmers in NZ as it improves genetic quality and productivity of their herds, resulting in a higher quality and yield of venison or velvet, increasing income and reducing the risk of injury to animals. By using AI, farmers can ensure that the offspring are of consistent quality, which can be important for buyers who are looking for high-quality products or animals. Overall, AI can have a positive effect on meat and velvet production by allowing farmers to select superior genetics, time breeding for specific market demands, and increase efficiency. However, it is important to weigh the potential benefits against the costs and skill requirements of implementing AI on the farm against the potential benefits of improved genetics, increased efficiency, and controlled breeding.