



Every year Geno produces over 1.3 million doses of semen from elite bulls. After stringent quality control, the semen is distributed to more than 30 countries worldwide.



Semen from Norwegian Red bulls is collected once or twice a week at the AI center.

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Geno AI center
at Store Ree

The organization

Geno is a co-operative owned by Norwegian cattle farmers. Geno conducts research and development for cattle breeding in Norway and produces and distributes genetic material.

Geno's vision

Breeding for better lives

Offices

Geno's head office is in Hamar, Norway.
Geno AI center at Store Ree is 17 km south of Hamar
Geno performance test station at Øyer is 15 km north of Lillehammer

Geno SA
Holsetgata 22, N-2317 Hamar
Norway
Tlf: +47 950 20 600
E-post: post@geno.no

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Production of bull semen

Every year about 115 Norwegian Red bulls arrive at the Geno AI (Artificial Insemination) center at Store Ree from the Geno performance test station at Øyer.

The bulls are 14-16 months old when they arrive at Store Ree. Here they produce semen for once or twice a week collection. Each semen collection provides 8-10 billion sperm cells, corresponding to 400-800 insemination doses for inseminating individual cows.

Once the bulls have produced 2100 doses of semen, they are moved to the waiting bull facilities to await results of progeny testing. About 1500 doses from each bull are sent out to the domestic market as young bull semen. The remaining doses are stored as a reserve supply.

Progeny testing

After about 4 years in the waiting bull facilities, all bulls will have had daughters who have calved. Information from daughters' production, health, conformation, fertility and other important traits forms the basis of progeny testing, which takes place 3 times a year.

A group appointed by Geno's board selects bulls with the highest total breeding value following each progeny testing. These become elite bulls and thereby father a new generation of Norwegian Reds.

The selected elite bulls (10 to 12 per year) are moved from the waiting bull facilities to the elite bull facilities. There they produce semen for the domestic and international dairy AI market.

Processing and cryopreservation

All semen is analyzed under a microscope before being extended and put into plastic straws. Each straw represents one insemination dose, which contains approximately 12 million sperm cells.

The semen in straws is frozen to -196°C and stored in liquid nitrogen where it can remain indefinitely. All hand-



The waiting bull facilities at Geno AI center at Store Ree house 500 Norwegian Red bulls.

ling, transport and delivery of semen is done in liquid nitrogen. When a cow is to be inseminated, the semen is defrosted in a water bath of 37°C . After 15 seconds in the water the semen is ready to use.

Semen distribution

Before semen is distributed to Norwegian dairy farmers, each new elite bull must produce sufficient doses to supply demand within Norway. Production of Norwegian Red semen for the international market also takes place at Store Ree. Semen is sold internationally

through Geno's subsidiary Geno Global AS.

Together with TYR (the Norwegian Beef Breeders Association) Geno produces and distributes semen from different cattle breeds.

Geno works with the Genetic Resource Committee and different breed organizations to produce and distribute semen from older-era Norwegian cattle breeds. Geno also imports semen from foreign dairy and beef cattle breeds.