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Atoms for Peace

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Improving livestock productivity in Mongolia

The challenge...

The livestock sector is a pillar of the economy in Mongolia, employing 30% of Mongolians. It is also key to the survival of nomadic families that rely entirely on livestock herding. In 2009, livestock numbers were over 40 million, including camels, horses, cattle and sheep. However, animal numbers vary greatly from year to year, due to the high death rate caused by adverse climatic conditions. Summer droughts and harsh winters have a severe effect on livestock, plant growth and feed availability. Some 8 million livestock animals died during the 2009–2010 winter period due to low temperatures and thickly snow-covered non-grazable land. It is essential to integrate crop and livestock systems to improve productivity and sustainability in the farming sector.

The project...

TC projects have been providing support in this field to Mongolia since 1986. Recent projects build on the successes and experiences gained to improve the quality and quantity of feed, concentrating on high nutritional value and tolerance to low temperatures. Livestock genetic potential is improved through the use of artificial insemination coupled with radio immunoassay to measure progesterone.

Through the technical cooperation programme, expertise and fellowship training have been provided on animal nutrition, pasture management and artificial insemination. Studies have been undertaken

to determine the nutritional value of various feed resources, the use of urea–molasses blocks, and interspecies cross-breeding between yak and cattle to increase beef and milk production.

The impact...

Two specialized laboratories, one to monitor reproductive efficiency using radioimmunity, and one for isotopic nutrition tracing and labelling technologies to evaluate the nutritive value of feed, have been established at the Mongolian State University of Agriculture and Research Institute of Animal Husbandry.

Improved nutrition management has decreased the input costs for farmers by almost 67%. Better animal feed crops, together with an animal feeding programme, have improved the conditions for animals during winter, and have protected the lives of animals.

National capacity has improved in the use of artificial insemination in yaks and cattle, feed evaluation, the use of alternative feeds, evaluation of the nutritional value of feed resources available in different zones of Mongolia, and the identification of toxic plants and plants containing bioactive compounds of industrial products.



Cattle grazing during the winter months in Mongolia.