

## MONGOLIA

### Animal health laboratories

In Mongolia, 30 per cent of the population relies on nomadic livestock rearing. Livestock contributes 16 per cent to national GDP by providing meat and milk for domestic consumption and furs and skins for export earnings. Yet, over the decades, the livestock industry has been challenged by a lack of forage due to the country's long, deep winters, and by occasional flare-ups of foot-and-mouth disease (FMD). In 2009–2010, during a particularly severe winter compounded by FMD outbreaks, Mongolia lost 9.7 million animals, 22 per cent of its total livestock, which immediately affected meat prices and led to a 1.6 per cent drop in GDP. Support from the Joint FAO/IAEA Division has enabled Mongolian laboratories to improve animal nutrition and timely response to disease outbreaks. This has not only reduced animal losses but also increased farmers' incomes. The Joint Division also assisted the sector in developing and implementing short, medium and long term strategies for controlling FMD which, combined with improved diagnostic capacities, enabled the Veterinary Services of Mongolia to successfully contain FMD outbreaks in 2010–2011 and 2013–2014. In 2013, 24.8 million animals were vaccinated again.

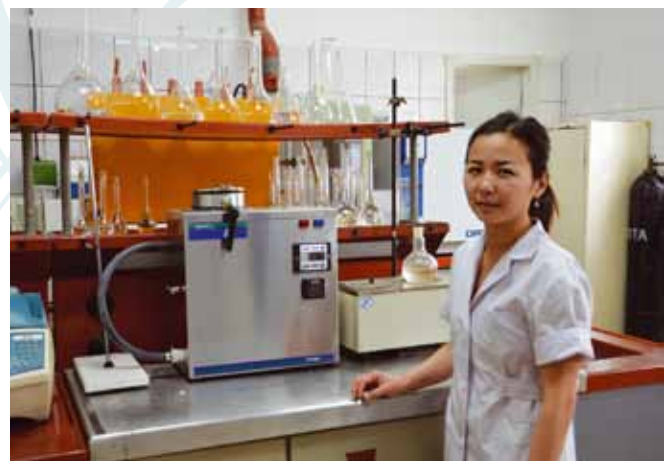


## Increased capacity to control animal disease

### Improves productivity and herders' livelihoods

The Mongolian livestock industry drives the country's rural economy and contributes significantly to food security. However, growth in the industry has been confronted by inadequate feed and forage and occasional flare-ups of transboundary animal diseases, such as foot-and-mouth disease (FMD). Since 1987, the Joint FAO/IAEA Division has contributed to Mongolia's efforts to build capacity in animal production and health research and practices by training personnel and providing equipment and expert services at Mongolian veterinary laboratories. This included supporting the animal production research group at Mongolian State University of Agriculture (MSUA), and the animal health research groups at the Mongolia Institute of Veterinary Medicine (IVM) and at the State Central Veterinary Laboratory (SCVL).

At IVM and SCVL, the Joint Division assists in strengthening capacities in the diagnosis of animal diseases, especially transboundary diseases such as FMD. In addition to the development of human resources, standard operating procedures, guidelines and laboratory protocols, the SCVL also developed a biosecurity level-3 (BSL-3) laboratory to work on transboundary animal





diseases. These improved research and diagnostic capacities enabled the Veterinary Service of Mongolia to contain FMD outbreaks in 2013 and 2014. A 2014 mission from the Crisis Management Centre of FAO and the World Organisation for Animal Health (OIE) acknowledged that Mongolia was well prepared for addressing FMD outbreaks in the country.

## Producing vaccines against FMD

Additionally, the Joint Division has supported the efforts of Biocombinat, a state-owned enterprise, in developing a vaccine reconstitution technology for addressing emergency FMD outbreaks in the country. The technology involves importing an inactivated, highly concentrated FMD virus antigen and then reconstituting and formulating 500 000 to one million doses of vaccines to be used for urgent containment of FMD outbreaks. The Joint Division has also supported the IVM Laboratory in developing irradiation technologies to produce vaccines against bacterial and viral diseases, and MSUA in developing its animal nutrition and reproduction laboratories.

MSUA also has increased its capacity for implementing various methodologies for treating animal feeds to improve digestibility. This, in turn, enhances the condition and productivity of animals' bodies, especially for enduring long and deep winters.

## Improved feeding methods increase farmer income

Methodologies have been developed for enzyme treatments of crop residues and tested on-farm. At the

end of the feeding trials, sheep weight increased by up to 13 per cent compared to controls on conventional feedings. For farmers selling meat, milk, breeding and wool from sheep, the improved feeding methods, when balanced against costs such as feed and medicines, led to an increase of up to US \$23 for every sheep they had under intervention. As for cattle, the MSUV team developed and branded feed for cattle. Its benefits were demonstrated on-farm when the participating cows doubled their per-day milk production and increased farmers' incomes by up to US \$170 per month. In addition, Mongolia has developed a national gene bank that preserves semen from indigenous animals, and has also implemented artificial insemination field services for cows and yak.

As many transboundary animal diseases such as FMD and peste des petits ruminants (PPR) are endemic in the region, the Joint Division is supporting efforts to build a regional disease control network. Building on the experiences in Mongolia, this network would provide a platform for China, India, Mongolia and Russia to work together to address issues of controlling transboundary animal diseases.

### Partners:

Biocombinat, Mongolia

Mongolia Institute of Veterinary Medicine

Mongolian State University of Agriculture

State Central Veterinary Laboratory, Mongolia

### For further information

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