

GOBI REGIONAL ECONOMIC GROWTH INITIATIVE

Mongolia
IMPROVING BASIC VETERINARY
SERVICES FOR HERDERS

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May 25, 2002 to June 22, 2002

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I. Executive Summary

The "Improving Basic Veterinary Services for Herders" consultancy took place between May 25 and June 22nd 2002. In-country travel consisted of visits to Gobi-Altai, Uvorkhangai and Bayankhongor aimags. Meetings were held in Ulaanbaatar with Gobi Initiative staff, government officials and representatives of international organizations working in the veterinary and animal health sector in Mongolia. Visits to Gobi-Altai, Uvorkhangai and Bayankhongor aimags consisted of meetings with the Gobi Initiative regional staff, and discussions with livestock herders, local private veterinarians and veterinary government officials.

The primary purpose of the consultancy was to "improve the veterinary service training program operated by the Gobi Initiative's agricultural development program" by assessing the current program and making recommendations for changes. In addition the consultant was asked to provide a general assessment of veterinary services in Mongolia and comment on the role of the Gobi Initiative in improving herder access to veterinary services. The consultant addressed the role for improved animal health in the Gobi Initiative's overall goal of assisting herders to produce a high quality and marketable livestock product.

Recommendations regarding the content and implementation of the veterinary service training program include the following:

1. Change the name of the "veterinary service training program" to "animal health training program" to place the emphasis on herder training in animal health and to avoid the expectation that this will be a program designed to provide professional training for veterinarians.
2. Prioritize the current list of topics that make up the training program curriculum and place on emphasis on those topics that are of concern to herders.
3. Identify a few important animal health issues of concern to herders that will be the focus of the training program and develop complete and accurate training materials.
4. Maintain central control of the development of topics and training materials to ensure the distribution of a standard and quality product and to maintain the "herder emphasis" of this program.
5. Implement the program with a sustained effort in mind by which a group of selected herders will receive formal training and then be provided with additional materials over time that they can then pass on to their fellow herders through informal training sessions.
6. Allow for a mechanism to gather feedback from program participants during the course of the animal health training program.
7. Utilize the current Gobi Initiative project programs to support and expand the animal health training program by disseminating animal health information to herders through radio programs, news stories, the soum information officers and the animal health training program participants.
8. Consider adapting the methodology and content of the animal health extension program launched by the German Technical Cooperation (GTZ) in four aimags in Mongolia in 2001, to the Gobi Initiative animal health training program.

Veterinary service provision in Mongolia faces considerable challenges. Issues that are currently at the forefront of discussion and concern include

- The registration and availability of veterinary pharmaceutical products;
- The licensing of veterinary professionals;
- The veterinary law that defines the animal health responsibilities of the government, private veterinarian and livestock herder;
- Confusion surrounding the pricing of veterinary services in a system that does not clearly define the distinction between government subsidized and private veterinary services, ie, recognition of the distinction between those veterinary services that are "private goods" and those that are "public goods"; and,

- A need to require a standard level of proficiency among licensed veterinarians

The Gobi Initiative project recognizes the role of improved animal health in the overall goal of producing a higher quality and more valuable livestock product. The emphasis on the importance of animal health through media messages, herd management training and the facilitation of improved herder-veterinarian relationships has had concrete results. Records indicate that the members of the Gobi Initiative herder groups receive a higher proportion of the government subsidized veterinary services available than neighboring non-project herders. Discussions revealed that Gobi Initiative herders have a solid understanding of the benefits of veterinary care for their livestock and the need to spend resources to improve animal health.

The need for veterinary services, especially in the control of extremely contagious diseases and those transmissible to humans, remains important to the viability of livestock agriculture. *The Gobi Initiative should continue their current strategy of improving herder access to available veterinary services by facilitating the establishment of good working relationships between veterinarians and herders.*

The development and implementation of the animal health training program for herders will provide livestock owners with the tools they need to make animal health decisions and provide basic health care to their own livestock. *Information provided by the Gobi Initiative in the form of radio programs, newspaper articles, informal meetings and formal training sessions will be invaluable to herders and veterinarians as they strive to develop a sustainable animal health care delivery system. The Gobi Initiative can play a important role in facilitating the transition to a system of veterinary service provision within the context of a market economy by providing up to date and accurate information on relevant veterinary laws, regulations, service fees and herder training on important animal health issues.*

II. Technical Report

Part 1: Veterinary Service (Animal Health) Training Program for Herders Operated by the Gobi Regional Economic Growth Initiative

The primary goal of the Gobi Initiative's Agriculture Development Program is to provide Mongolian livestock herders with technical assistance that will lead to the production of a high quality, valuable and marketable livestock product. An important part of producing a high quality livestock product is the maintenance and improvement of animal health. Routine professional veterinary care and sound animal health management are essential in the maintenance of a healthy livestock herd. An animal health training program for herders should emphasize the role of both the professional veterinarian and the herder in the maintenance of animal health. *The training program should provide herders with the information necessary to make educated decisions about the health of their livestock, provide basic health care to their own animals and assess the costs and benefits of animal health interventions.*

Assessment of Animal Health Training Program Content

The content of the animal health training program was assessed based on the curriculum outlines designed by the Gobi Initiative aimag offices with guidance from the central office in Ulaanbaatar. Translations of the training program curriculum outlines are provided in Appendix 3. The main subjects of the training programs are similar across the aimag plans. The curriculum outlines differ primarily in the degree of detail provided on the subjects to be taught. The training programs are generally broken down into six to ten subjects. The technical accuracy, the technical level and the appropriateness of each of the subjects presented are reviewed below.

Technical Accuracy

The animal health training program for herders must first and foremost provide technically accurate information. *Technically accurate information does not have to be detailed or complicated but the development of teaching materials and the content of the lessons to be taught must be researched thoroughly and prepared carefully to avoid the circulation of incorrect information.* The animal health training program curriculum outlines do contain some information that indicates a degree of misunderstanding surrounding the cause and routes of transmission of some livestock diseases. For example "ring worm" is listed as a parasitic disease. Although the name is misleading, "ring worm" is a skin disease caused by a fungal infection not a parasite.

Technical Level

The animal health training curriculum outlines indicate that the degree of technical detail of the material that will be presented during the training program will be beyond the needs of even the most experienced herders. The outlines indicated that many subjects and a large quantity of information will be presented over a relatively short period of time. Even if the technical level of the information is brought down the training participants will find it difficult to process the quantity of information currently included in the program outline.

Subject Material

Legal Aspects of Veterinary Medicine:

The primary piece of legislation governing animal health and its related activities in Mongolia is the "Mongolian Law of Livestock Gene Pool and Animal Health". In addition there is a "National Animal Health Program" and multiple rules and regulations governing livestock disease quarantine, livestock product inspection, the pricing of veterinary services and the relationship between private veterinarians, local governments and the State Veterinary Service.

A veterinary training program for herders should not focus on the details of these laws and regulations. Important pieces of information contained in the laws and regulations should be highlighted and incorporated into training material and not presented as an isolated study of the law. Relevant information would include regulations concerning the pricing of veterinary services or the quarantine regulations associated with infectious disease outbreaks. Examples: >

- A lesson and material explaining foot and mouth disease could include information about quarantine regulations and the protocol and reasons for reporting suspected herd outbreaks.
- Information about the regulations governing the fees for veterinary services could be incorporated into lessons about the financial costs associated with not vaccinating for a disease such as enterotoxemia.
- Any new information about veterinary service fees could be distributed through radio programs such as "Market Watch" or other Gobi Rural Business News programs.

Infectious Diseases:

Information on infectious livestock diseases should be a major component of the Gobi Initiative's animal health training program for herders. *The program should emphasize infectious diseases found in the region that are associated with significant production and therefore economic losses and those that are highly contagious and/or a concern for human health.*

The more detailed curriculum outlines indicate that general information on infectious diseases, the basic definition of an infectious disease, common routes of transmission and typical preventive

measures will be discussed. The infectious diseases mentioned are generally those of greatest concern in Mongolia. Infectious livestock diseases that are transmissible to humans should be indicated as such. An attempt should also be made to make a distinction between those infectious diseases which are a concern primarily for the individual herder and those infectious diseases that are of a concern to the entire community. This distinction is often termed "private" vs. "public" goods. Government pricing regulations for veterinary services now reflect this distinction.

Noninfectious Diseases:

The majority of noninfectious livestock diseases are associated with the feeding and management of livestock. Vitamin and mineral deficiencies, the ingestion of poisonous plants and injury or destructive habits are generally affected by how and where animals are grazed and housed. Many of the health issues related to vitamin and mineral deficiencies would vary from region to region. In general livestock with adequate pasture, water and shelter and a sound breeding program should have very few metabolic or noninfectious diseases.

Parasitic Diseases:

Strictly speaking a parasitic disease is an infectious disease. However, parasitic disease, generally insects, worms and protozoa, are often distinguished and discussed separately from infectious diseases caused by bacteria and viruses. The animal health curriculum outlines list many of the parasitic diseases of importance in Mongolia. *The details of the biology and life cycles of various parasites are not necessary in an animal health training program for herders but information about the transmission and damage caused by parasites is important. The different classes of parasites should be introduced along with information regarding transmission and the appropriate treatment and prevention of parasitic diseases.*

Traditional Veterinary Medicine:

A number of the curriculum outlines refer to methods of "bleeding, puncture and cauterization" as a component of the veterinary training program for herders. *In only very rare circumstances would blood loss have any beneficial effects on the health of an animal. Any object used to puncture a blood vessel or the skin carries the risk of introducing bacteria that could cause serious infections. Cauterization of vessels will reduce blood flow or result in burns that will also put the animal at risk of acquiring an infection or losing the use of that area of its body.*

The collection and use of medicinal plants has a place in animal health care if a reliable source of information on the identification and use of medicinal plants can be found and incorporated into the training program.

Livestock Breeding:

There are definitely animal health issues associated with the breeding management of livestock. In general strong, healthy and fully grown animals should be selected for breeding. Livestock with a history of reproductive failure are more likely to have reproductive problems in the future.

Sanitation:

Sanitation is an important aspect of disease prevention. Protocols for disinfection and sanitation should be used routinely by both herders and veterinarians to prevent the spread of disease among or within livestock herds. This would include the use of clean needles and instruments, the preparation of clean areas for young livestock and the preparation of winter shelters.

Obstetrics and Gynecology:

This is an area of animal health to which the herder can contribute significantly. Simply being present at the time of the birth of the young to provide necessary assistance to the livestock can improve the outcome of the delivery. Herders can be educated in the normal presentation and timing of the birthing process in different species. They can learn to identify signs of difficulty and perform simple manipulations that will lead to a less complicated delivery of the young. In addition any animals that had a difficult delivery can be watched carefully for any signs of subsequent illness or infection.

Anatomy and Physiology:

A herder needs a basic understanding of the anatomy and physiology of livestock species in order to observe livestock and perform a physical exam to distinguish a healthy animal from a sick animal. Techniques of observation, history taking, and performing a physical exam will allow the herder to assess the health of their livestock. An emphasis should be placed on the identification of healthy or normal livestock so that the unhealthy or abnormal can be easily and quickly recognized.

First Aid:

A number of basic techniques can be learned by herders to apply in the assistance of injured livestock. Lessons on wound management, frostbite treatment and fracture repair could be developed. The basic steps of keeping an animal warm or cool and sheltered with feed and water available should be stressed as important in any situation.

Nutrition:

An animal with adequate nutrition will be stronger and better at fighting disease than one that is underweight and in poor condition. Pasture management and rotational grazing can also decrease the risk of livestock acquiring parasitic and infectious diseases from the environment by allowing time for pastures to be disinfected by the sun or parasites to be killed by the frost.

Recommendations on Animal Health Training Program Content

Subject Material

The majority of subject material outlined in the animal health training program for herders is appropriate. As mentioned above the quantity of information is currently too great and there is a need to prioritize the subjects and topics before further development of materials takes place. The techniques on "bleeding and puncture" under the subject heading of "Traditional Veterinary Medicine" should NOT be included in the animal health training program. The veterinary profession no longer accepts bleeding and puncture as beneficial treatment options and their use will undoubtedly cause more harm than good.

The large emphasis on animal health laws and regulations should be rethought. The information should be presented as it applies to animal health issues but not as an isolated study of the law. The purpose of the training program is not to lecture herders on their animal health responsibilities according to the law but to give them the knowledge and the tools to make the animal health decisions that will be of benefit to the production of their herders and the improvement of their livelihoods.

Message Focus/Material Development

The animal health training curriculum outlines indicate that the intention of the program is to cover many subjects. Many diseases and their causes, treatment and prevention are listed. *The presentation of this amount of material over even an extended amount of time will overwhelm the abilities of the herder participants to absorb the information. They will not be able to process the amount or details of all the subjects in the curriculum outlines.* In addition the time and resources needed to prepare the materials for the subjects outlined are not available.

The recommendation is to focus on a few animal health issues. The number of subjects covered can expand over time as the program continues. Subjects should be selected based on the herders' demands and concerns about animal health. Information can also be collected from local private veterinarians and State Veterinary Services about the diseases of importance in the area.

The three primary disease-related animal health concerns of herders in the areas visited were contagious agalactia (Mycoplasma) of goats, coenurosis or GID of sheep and goats, and diarrhea of newborn livestock. Two diseases of public health concern in the regions are rabies and brucellosis.

In addition to information on animal health and livestock disease, the program should focus on one or two general messages. This information should *replace the detailed review of the animal health laws and regulations proposed in the curriculum outlines.* Important messages would include that fact that animal disease is often multi-factorial with genetics, nutrition, environment and management affecting the outcome even in the case of specific bacterial, viral or parasitic disease. *Other messages could include the importance of looking at the financial costs and benefits of both preventive and individual animal treatment.* Information on the rules and regulations surrounding the pricing of veterinary services could be incorporated into material addressing the production of quality livestock products.

Content Addition: Herder Assessment of Animal Health

A section emphasizing the techniques of assessing animal health should be incorporated into the animal health training program. Although the experienced livestock herder may unconsciously make this assessment every day there is a benefit in reinforcing the process and providing a detailed description of the technique. *The three main components of assessing the health of an animal are taking a history, making observations and performing a physical exam.* The information the herder gathers will be important for their personal assessment of the health of their livestock and will prove useful as they explain the signs and symptoms of diseases to veterinary professionals when seeking their advice.

Taking a "history" involves collecting information about the sick animal or the affected herd. It is important to know the following about the animal or herd that is affected: Species/breed, age, sex, castrated or intact, breeding date, delivery date, housing/shelter type, pastures grazed, feed consumed, medications, vaccines, or parasitic drugs administered, other solutions or treatment techniques tried, duration of symptoms, severity of symptoms, and whether or not any other animals in the herd are showing similar signs of disease.

Observation involves simply watching the animal or herd for anything unusual. Observation is done from a distance without disturbing the livestock. The herder should assess the following: The condition of the animal; is it thin, weak or stunted? The behavior of the animal; is it nervous, separated from herd, scratching or rolling? The movement of the animal; is it circle, limping or staggering? Are there any discharges from the animal; blood, feces or urine? Assess the respiration

of the animal; coughing, open-mouth breathing, increased respiratory rate or effort? Typical unusual signs that often indicate that an animal is sick include a disinterest in grazing, falling behind the herded group, not growing as fast as others in the group, or signs of discomfort and agitation.

The third phase of animal health assessment is *performing a physical exam*. Once an animal has been identified as abnormal through observation and/or an abnormal history it is time to approach the animal and perform a physical exam. *The animal should be restrained comfortably in a standing position if possible. The herder should then examine the animal from head to toe looking, feeling and smelling for any signs of disease. A temperature, pulse and respiratory rate should be taken, recorded and compared to normal values. Any abnormal signs should be noted and an attempt should be made to determine which organ system is affected. Once the organ system or systems have been identified a list of possible diseases or differential diagnosis can be generated.* The herder can then compare the information he/she has gathered by observing and examining the animal to information about specific livestock diseases or conditions.

The English version of the material compiled for the Handbook on Livestock Health produced by ACDI/VOCA and UNESCO in 2000, has been provided. The Mongolian version of this book is also available at the Gobi Initiative offices and library. The material includes a chapter on the identification of sick animals and contains a detailed description of performing a physical exam.

Content Addition: When to Seek Professional Help

The material developed for this animal health training program for herders should provide guidance on when herders should seek professional assistance. The goal of the program is not to eliminate a herder's need for professional veterinary assistance. A herder can be trained to prevent nasal infections in young livestock by preparing clean pens, a herder can clean and bandage a wound on a goat's leg or administer an antibiotic as directed by a professional veterinarian. However, in the event of an outbreak of a serious and contagious infectious disease such as foot and mouth disease or rabies, professional assistance must be sought immediately. It will be useful to include information about the preventive measures that can be taken by both herders and veterinarians, the treatment options and the reporting requirements associated with each disease presented as part of the animal health training program.

Developing a Knowledge Base

Record keeping is currently a major component of the Gobi Initiative's "Herder Management and Livestock Improvement" program. It is recommended that herders be encouraged to expand the record keeping component of their herder management activities to keeping and recording information about the health of their livestock. Recording disease events, clinical signs, disease prevention measures and treatments administered will allow herders to assess their animal health burden and improvements over time. In addition the process of recording animal health events will encourage herders to continually assess the health of their livestock. Over time they will compile their own knowledge about the effectiveness of preventive measures, treatments and other interventions. Herders will be able to more accurately calculate the losses due to livestock disease, the costs associated with treatment and veterinary services as well as the benefits of healthy livestock. It should be emphasized that this type of record keeping will be beneficial to the herder and that it is not done simply to contribute to the reporting requirements of the veterinary authorities.

Resources: Animal Health Information Currently Available

There is a considerable amount of material on animal health issues that has recently been designed and published in Mongolia. The material listed below has been provided to the Gobi Initiative

Ulaanbaatar staff. The material includes the following: UNESCO-ACDI/VOCA "Livestock Health" Book #20, Ulaanbaatar, 2001; ACDI/VOCA Pamphlets on Brucellosis, Agalactia and GID; GTZ Pamphlets and Extension Material on Mange, Brucellosis, Diarrhea of Young Livestock and Cattle Grubs (Hypoderma); Goat Herder Handbook, Goat Health Chapter, (ACDI/VOCA and Gobi Initiative).

Publications available in English specifically for livestock owners with limited veterinary services available include the following: Quesenberry, P. and M. Birmingham. *Where There Is No Animal Doctor*. A Publication of Christian Veterinary Mission, Division of World Concern, Seattle, WA, USA. 2000. ISBN #1-886532-11-7; Thedford, Thomas. *Goat Health Handbook, A Field Guide for Producers with Limited Veterinary Services*. Winrock International, 1983.; *Sheep Health Handbook, A Field Guide for Producers with Limited Veterinary Services*. Winrock International.

A good source of accurate information on livestock diseases is the following: Ajello, Susan, editor. *The Merck Veterinary Manual*. Eighth Edition. Merck & Co., Inc., Whitehouse Station, N.J., U.S.A., 1998. A more recent edition would also be appropriate.

Assessment of the Animal Health Training Program Implementation Plan

Development of Training Material:

The Gobi Initiative aimag offices have not developed the animal health training program beyond the outline of the curricula presented in Appendix 3. The expectation is that the selected trainers will develop the training materials for each session.

Selection of Trainers:

Different aimag offices are proposing to hire trainers from different institutions. The Gobi-Altai Gobi Initiative aimag office has proposed hiring veterinary professors from the Agricultural University in Ulaanbaatar to conduct the training programs for herders in the aimag centers. The Gobi-Altai office also plans to hire two local trainers, a private veterinarian and an aimag laboratory veterinarian. The Uvorkhangai office has selected two private veterinarians as trainers. The selection was based on a review of materials that were developed for the training program. The Bayankhongor office plans to hire the aimag chief veterinarian and the head of the aimag laboratory to conduct the training sessions for herders in Bayankhongor.

Selection of Participants:

A herder from each of the Gobi Initiative herder groups will be selected to attend the animal health training program. The selection of the herder participants will be based on the advice of the master herder and their level of animal health experience.

Length of Program:

The proposed length of the program varies among the aimags. The Gobi-Altai office has proposed a 160 hour program to be conducted in 2, 14-day sessions. The Uvorkhangai office has proposed conducting the program in 3 stages, each consisting of 16 hours over 2 days. The Bayankhongor office has proposed a 2-day program that they plan to repeat. None of the aimag offices have considered extending or continuing the program beyond the initial set of training sessions. A standard course length would be advantageous.

Format of Lectures/Training:

The proposals suggest that the majority of the training material will be presented in the lecture format. *It is unclear what kind of "hands-on-training" would be organized, and this type training would be very effective in reaching herders.* The Gobi-Altai aimag office has proposed to conduct two levels of training. One level of training would be for herders with no formal training in animal health and the second level of training would be for herders with some former formal training in animal health. The Gobi-Altai proposal contains two sections of "hands on training" in the training program for herders with some former animal health training.

Purpose of Training:

The general goal of the animal health training program for herders, as stated by the Gobi Initiative aimag staff, is to inform herders about the benefits of veterinary care for their livestock and the importance of animal health. The Gobi-Altai aimag staff has also proposed training herders with former animal health training. The ultimate goal of this "re-training" of herder animal health specialists would be allowing them to qualify for a professional veterinary license and then provide veterinary services for the herders in their herder group. The Gobi-Altai aimag office emphasized the need to "increase competition" among local veterinarians. Discussions with the aimag government department responsible for approving veterinarians for license eligibility has apparently already taken place. Aimag officials have indicated that if individuals with former animal health training pass a test at the end of the training provided by the Gobi Initiative that they will receive the approval for licensure eligibility.

Recommendations for the Animal Health Training Program Implementation

The current animal health training program plan proposed by the Gobi Initiative aimag offices focuses on an initial effort to train a selected group of Gobi Initiative project herders in various aspects of animal health. In addition to focusing on and then developing the materials for the subjects to be covered in the training program, some thought must be given to the means of transferring the information back to the herder group members. *What is proposed below is a combination of formal training in animal health issues for the selected group of herders followed by a sustained effort to supply the animal health training participants with information and materials to share and distribute to their herder groups and the wider herder community.* The animal health training participants will have the potential of becoming animal health advisors for their respective herder groups. They will be encouraged to pass on the information they are provided through informal "herder to herder" training sessions.

Development of Training Material:

Training materials must be developed for the program. Once the subjects and areas of focus are decided materials should be developed under the direction of the Gobi Initiative central office. *An effort should be made to develop materials that can be used in the training programs throughout the Gobi Initiative region. The Gobi Initiative must be in a position to control the quality and content of the materials being used and the information being distributed as part of the animal health training program for herders.*

Selection of Trainers:

Trainers for the animal health training program must be selected with caution. The senior veterinary professionals working in the aimag or region may not be the best trainers. *The trainers should not be expected to develop their own teaching materials on the basis of the outline of a curriculum. To maintain a standard level of quality and a consistent program, the trainers should be provided with*

training materials and background information on the subjects to be taught. The trainers should be effective communicators and understand the concept of passing information on to herders to allow herders to make decisions about the health of their livestock. Lecturing herders about their "legal responsibility" to maintain the health of their livestock should be discouraged.

Selection of Participants:

The assistance of the master herders in the selection of training program participants will be very important. There is no need for the selected herder to have previous formal training in animal health. The selected herder will be expected to transfer the information received at the animal health training programs to their herder groups and the wider community of herders. *Herders should select an individual within their herder group from whom they will want to receive animal health advice. This may be an individual with prior animal health training, an experienced herder and/or a good communicator and teacher. The decision of who to select should be made with the involvement of the Gobi Initiative aimag office staff, the master herder and herder group members.*

Length of Program:

It is recommended that the animal health training program for herders be a sustained effort. The group of herders selected to attend the formal training programs will develop into animal health advisors for their herder groups and the wider herder community over time. It will be necessary to continue to supply these herder animal health advisors with information to pass on and distribute. Due to the cost and inconvenience associated with collecting the herder animal health advisors in the aimag center for continued training programs, it will be important to develop a system by which information and training materials can be passed on to the animal health trainers. The Gobi Initiative information officers can be used to coordinate the distribution of training materials to the herder animal health advisors in each sown. In this way the herder animal health advisors can receive new information and materials on a quarterly or more frequent basis.

Format of Training:

It is recommended that the animal health training program for herders consist of a combination of formal training for the selected herders and informal "herder to herder" training on the local level. The formal training of the selected herders should begin with an initial training session to explain the program to the herders and discuss their potential role as animal health advisors to their herder groups and the wider herder communities. The "herder to herder" training should be facilitated with the continual supply of information and materials to the herder advisors for their use in the field.

The herder animal health advisors should receive some training on teaching methods to be used when transferring information to the herder groups. *There should be an emphasis on herder participation in the learning process and a focus on decision making.*

Purpose of Training:

It is essential that it is clear to the training participants (animal health advisors) that they are not being trained to take over the duties of a veterinarian. Their role will be to transfer information on animal health, including information on service fees and the cost of veterinary pharmaceuticals, to their herder group members. It will be important that these animal health advisors work closely with the private veterinarians serving the herder group. The animal health advisors can serve as the communication link between the herders and veterinarians.

Opportunities for Cooperation:

The GTZ (German Technical Cooperation) veterinary project in Mongolia has developed and launched a rural advisory program with a focus on animal health issues. The program was initiated in 2000, in Tuv, Dornobi, Uvs and Zavkhan aimag. Materials are developed centrally in collaboration with the Mongolian National Veterinary Association. A trained "herder advisor" from each soum in the project area is responsible for conducting sessions with 25-30 groups over two months, two times a year to disseminate the animal health information.

The program is designed to provide herders with important information about livestock disease. The materials address the identification of symptoms of disease and the options for treatment and prevention. The role of the "herder advisors" is to share the animal health information provided. They are not trained to take the place of a private veterinarian and are discouraged from providing any veterinary services.

The GTZ project has currently developed four training cycles. Each cycle focuses on a different animal health issue. The first four subjects to be developed were the following: Hypoderma (cattle grubs); Brucellosis (zoonotic disease); Diarrhea of Young Animals and Mange (external parasite).

Samples of the GTZ training materials were provided to the Gobi Initiative and reviewed by Gobi Initiative project herders, aimag officers and local veterinarians. The herders, Gobi Initiative staff and private veterinarians who reviewed the material concluded that the information was useful and that the quantity and technical level of the content was appropriate.

The GTZ program is designed for herders and is similar in content, format and structure to the proposed animal health training program for herders that could be effective within the current framework of the Gobi Initiative program. The material and methodology used by the GTZ project could be adapted to meet the needs of the Gobi Initiative.

The GTZ project plans to expand their animal health rural advisory program through radio broadcasts. This is an area in which the GTZ project would be interested in cooperating with the Gobi Initiative. The material developed by the GTZ project could be adapted to radio programs currently being run by the Gobi Initiative and the broadcasting could be expanded into the GTZ project regions. The considerable time and effort it takes to develop materials for the animal health training programs could be shared between the two projects.

An English translation of a description of the GTZ "herder advice system" was provided by Dr. Jochen Currie and is attached to this report. In addition a full set of training materials and the posters and pamphlets that accompany the training materials have been provided to the Gobi Initiative.

Part 2: Improving Herder Access to "Adequate" Veterinary Services

Assessment

The Gobi Initiative Herder Management program has worked to improve access to adequate veterinary care for selected herder groups. The members of the Gobi Initiative herder groups have been required to identify a private veterinarian to serve the animal health needs of their livestock. In some cases the Gobi Initiative aimag offices have simply encouraged the establishment of a relationship between the herder and the veterinarian. In Gobi-Altai and Bayankhongor the Gobi Initiative offices have developed a three-way contract or letter of agreement. The document outlines the responsibilities of the veterinarian, the herder and the Gobi Initiative in "improving veterinary

service for the livestock of selected herders". English translations of the three-way contracts are provided in Appendix 4.

The three-way contract is a document signed by members of the Gobi Initiative herder groups, herder-selected private veterinarians and the Gobi Initiative aimag office staff. The contract was designed as a mechanism with which to "improve veterinary services to herders" and therefore the working relationship between herders and veterinarians. Individuals involved in the program concluded that the involvement of the Gobi Initiative and the signing of the three-way contracts have improved the relationship between herders and veterinarians.

Herders involved in the three-way contracts reported that they are satisfied with the veterinary services being provided. The herders' livestock have received the government subsidized preventive veterinary measures (vaccination and parasite treatment) as ordered and in a timely manner. Herders stated that they could afford the service fees set by the government for the subsidized preventive services. The private veterinarians report that the herders have been eager to order their services and pay the service fees involved.

Statistics, provided by the Gobi Initiative aimag officers in Gobi-Altai, confirm the reports of the herders and veterinarians who were interviewed. The aimag office records indicate that 471 of the 559 project herders (84.3%) received some type of veterinary service for their livestock. A combination of vaccination, deworming, dipping for external parasites and other preventive measures were administered to project herder livestock, totaling 289,600 procedures. The Gobi Initiative aimag officers reported that 13.9 million MTG were collected by the private veterinarians for these services. The numbers indicate that private veterinarians collected approximately 50 MTG for each procedure. Fifty MTG is the average government dictated service fee for the administration of a government subsidized service (vaccine/parasite prevention).

There is a considerable amount of "good feeling" surrounding the three-way contracts. Although not enforceable the contracts seem to have assisted in the establishment of a degree of trust between the herders and the veterinarians. The Gobi Initiative aimag staff has expended a considerable amount of effort to encourage private veterinarians to follow through with their commitment to service the livestock of the herder groups and the herders to pay for the veterinary services.

The intervention of the Gobi Initiative staff has ensured that the Gobi Initiative project herders receive the government subsidized veterinary services available. There is no indication that the Gobi Initiative herders are receiving any more than what private veterinary clinics are providing to other herders in the region. The availability of services over and above the government subsidized preventive measures are limited due to a lack of professional knowledge on the part of the veterinarians and the high transaction costs associated with any services outside routine vaccination and parasite prevention.

Recommendations

The three-way contracts should be examined and standardized if they are to be used in the future. The role of the Gobi Initiative should be clarified for both the aimag staff and the private veterinarians and the project herders. It is the intention of some of the Gobi Initiative aimag officers to use the animal health training program to assist formerly trained veterinarians and animal health technicians in obtaining a veterinary license and access to state subsidized vaccines and parasite treatments. This misunderstanding needs to be rectified and the clause should be removed from the contracts.

Facilitating the establishment of more veterinary clinics in the project areas to "increase competition" will not necessarily improve the quality of service available to the herders and may

endanger the viability of the veterinary practices currently operating in the region. *It is recommended that the Gobi Initiative NOT encourage the establishment of more licensed veterinary clinics but that they concentrate on facilitating the improvement of relations between veterinarians and herders within the current system.*

The demand for veterinary services over and above the routine preventive measures currently provided will only develop as the value of the individual animal or livestock product increases.

Other Veterinary Assistance Projects:

The VetNet (Christian Veterinary Mission) project, working under JCS in Mongolia, has a rural veterinary assistance program. The project provides herders with vouchers to claim veterinary services from private veterinarians who have received training through the VetNet program. The private veterinarians have been trained in performing clean castration surgery with local and general anesthesia. Veterinarians have also been trained to treat bacterial diseases of livestock with good quality antibiotics and have been encouraged to use different types of anti-parasitic drugs. Some veterinarians have also received training in the techniques of equine teeth floating (filing/trimming). The VetNet trained veterinarians may be a source of improved or expanded veterinary services. Gobi Initiative aimag officers have reported that VetNet veterinarians are serving Gobi Initiative project herders in Bat-Olzie and Oyank soums of Uvorkhangai aimag.

Part 3: Assessment of Veterinary Services in Mongolia

The rapid privatization of veterinary service delivery in 1999, led to a period of confusion and crisis within the professional animal health sector in Mongolia. Over the past three years the situation has improved. As the understanding of a fee for service veterinary system has grown within both the professional and herder community a system of animal health delivery has fallen into place. There are generally 1-2 licensed veterinary professionals operating out of private veterinary clinics located in the soum centers. The licensed veterinarians receive state subsidized vaccines and a limited amount of anti-parasitic drugs and solutions every year based on contracts they have made with herders requesting services. Licensed veterinarians hire 3-6 animal health technicians during the spring, summer and fall when routine vaccination or parasite treatment is taking place.

The availability of veterinary services beyond the state-subsidized vaccine and parasitic treatments is extremely limited. The limited supply and availability of veterinary pharmaceuticals, the high transaction costs associated with a veterinary visit to an individual herd, the lack of professional skills of veterinarians and the relatively low value of an individual animal all contribute to the limited scope of veterinary service provision. The major issues facing the veterinary profession in Mongolia today are detailed below.

Licensing of Veterinary Professionals:

The need to define and then require a standard level of proficiency among veterinary professionals is recognized by private veterinarians and government officials alike. The requirement of continuing education has been put forward as part of the criteria for obtaining and then maintaining a veterinary license. Acquiring the financial and professional resources to implement a continuing education program and the logistical constraints associated with retraining veterinarians will prove difficult for both private associations and government agencies.

The VetNet/JCS project currently has a plan to build a continuing education center and run a series of continuing education programs for veterinarians. The VetNet project has strong support for the veterinary school faculty of the Mongolian Agricultural University. It is unclear how the VetNet program would fit into the continuing education requirement for veterinarians being discussed at the

national level. The interest of the Gobi-Altai Gobi Initiative aimag office to offer a continuing education program to license veterinarians is likely to be related to the national discussion of the issue.

Veterinary Pharmaceuticals and Drug Registration:

There is a very limited range of good quality veterinary pharmaceuticals available in Mongolia. In addition to the limited quantity there is very little consistency in the product brand or product type available. The government through a tender system has imported many of the anti-parasitic drugs available in the country. A few private companies have received the permission to import antibiotics and anti-parasitic drugs for use in livestock. A third source of veterinary pharmaceuticals has been donations made to Mongolia as part of disaster relief and foreign aid programs. Not surprisingly The combination of government subsidized, donated and privately imported veterinary pharmaceuticals have contributed to confusion over the real monetary value of these products.

Regulations governing the importation of veterinary pharmaceuticals are still very strict and cumbersome. In addition to the testing requirements and scientific board approval required previously, a second board has been set up to grant government approval from the Ministry of Food and Agriculture. In contrast, the sale of veterinary pharmaceuticals in Mongolia, once they have been imported, is not strictly regulated. Veterinary drugs are available in most aimag capitals at pharmacies in the local markets or the aimag veterinary laboratories. Herders as well as veterinarians have access to these drugs.

The Mongolian Private Veterinary Association (MPVA) is trying to address the concerns about the poor availability of good quality veterinary pharmaceuticals by attempting to register four Norbrook veterinary pharmaceutical products. If approved the MPVA will act as the official distributor of Norbrook products in Mongolia and be able to add two broad-spectrum antibiotics, an ivermectin and an oral dewormer product to the products available through their veterinary drug network.

In addition to the limited availability of veterinary pharmaceuticals and the strict and often arbitrary drug registration process, the appropriate use of the veterinary pharmaceuticals in Mongolia also raises concerns. The constant variation in drugs available, the lack of warnings and instructions for use in the Mongolian language, the prevalence of expired drugs on the shelves, the distribution of medications designed to treat human patients and the over use of some products all may unfortunately contribute to the misuse of veterinary pharmaceuticals.

Veterinary Service Fee Schedule:

Fees for routine veterinary services are dictated by Government Order 392/A216 of the Ministry of Finance and the Ministry of Food and Agriculture, see Appendix 5. This order was designed to regulate the service fees that can be charged for the administration of the government-subsidized vaccines and anti-parasitic medications. The document, however, is not identification as only regulating the administration of government subsidized products. The fees are related to the activity (intramuscular injection, dipping, etc.) and not the value of the drug or vaccine administered. The average fee for a veterinary service is 50 MTG per animal. The veterinarians are expected to cover their overhead costs with this service fee. Private veterinarians are allowed to lower or raise the service fees by 25% with the approval of the local governor. The system of government price controls protects herders from the geographical monopoly of the veterinary clinics and the possibility of the veterinarians charging excessive prices for the government provided vaccine and parasitic medication. The pricing system, however, makes it very difficult for private veterinarians to develop the supply of any additional services or pharmaceuticals outside the system.

Mongolian Law on the Protection of Livestock Gene Pool and Health:

The Mongolian Law on the Protection of Livestock Gene Pool and Health has contributed to the confusion surrounding the animal health responsibilities of private herders, veterinary professionals and the State Veterinary Agencies for a number of years. A revised version of the law was passed in June 2001. Article 5, Section 16, *Finance of activities for protection of livestock gene pool and health*, states that the national government will finance the control measures, drugs and biopreparations needed for diagnosing and preventing a list of 26 infectious livestock diseases and the OIE list "A" diseases (Foot and Mouth Disease, Rinderpest, etc.) as well. Herders know about this law and often interpret it as meaning the government will cover the cost of vaccination against infectious diseases and parasite control.

The reality of the situation is that soum governments submit a budget to the aimag government that includes payment to private veterinarians for the administration of preventive measures for the infectious diseases and parasites of concern in the local area. The aimag government then approves or cuts the budget for animal health expenditures. The service fees associated with the administration of vaccines or medications against the infectious diseases that were cut out of the soum government budget are then the responsibility of the herders and the veterinarians must collect the payment for services directly from the herders. In the event that the item has been approved in the soum government budget, the private veterinarian submits written receipts detailing the number of animals he/she has vaccinated against the covered infectious disease and they collect the service fee from the soum government.

In Uvorkhangai, Bayankhongor and Gobi-Altai, a consistent policy seems to have been adopted by the aimag governments in regards to the service fees that will be covered by the State. A distinction has been made between those veterinary services that are "public goods" and those that are "private goods". For example the service fees associated with vaccinating livestock against brucellosis, anthrax and rabies in 2002, are covered by the local government budgets. The selection of these three diseases as the ones to be subsidized reflects the understanding that controlling brucellosis, anthrax and rabies will have not only benefits for the herders who own the livestock that are vaccinated but for the whole community.

Although the government payment of the service fees associated with brucellosis, anthrax and rabies vaccination seems to be consistent there are variations in payment plans from soum to soum. In Gobi-Altai many soum governments have declared that all vaccination of livestock will be "free" in 2002, to compensate for the significant loss of livestock over the winter. Herders need to be informed of the changes in the payment system on the local level as well as the reasons for the differences from year to year. Communication between private veterinarians, herders and the local governments will be essential in improving the working relationship between herders and veterinarians and in ensuring that the basic animal health needs of the livestock are met.