



Of herbs and healers

Evelyn Mathias-Mundy

A growing number of researchers are learning from farmers to solve problems. On animal health care, this relates to traditional veterinary knowledge which is called ethnoveterinary medicine. Only recently, Evelyn Mathias-Mundy wrote and annotated bibliography on ethnoveterinary. In this article she demonstrates the rich resource it offers for development. Ideas are given on how researchers and traditional healers can work together in development projects.

Farmers in Aramachay had a problem. Sheep in this sierra village in central Peru had skin diseases. The country's rampant inflation and crumbling economy meant that the commercial medicaments the farmers previously treated their animals with were now too expensive. Villagers and scientists working with the Small Ruminant Collaborative Research Support Project, coordinated by the University of California-Davis, met to discuss the problem. During the meeting a local shepherd recalled how area farmers used to rub afflicted animals' hides with leaves of a wild tobacco plant. The villagers wondered whether the plant, known locally as utashayli, could be used to make a dip for the sheep. The scientists took up the idea and helped farmers test it (McCorkle 1989). The tests showed that the dip reduced the number of parasites by more than 90 percent. The scientists are now studying ways of cultivating utashayli or controlled harvesting of wild plants to provide a continuous leaf supply (Bazalar and McCorkle 1989).

Peruvian villagers have helped project scientists solve another problem. Local farmers observed that feeding their cattle with artichoke leaves prevented the animals from getting liver flukes. Experiments showed that the leaves indeed reduced the incidence of these debilitating parasites (Bazalar and McCorkle 1989).

Learning from farmers

These two examples illustrate how a growing number of researchers are learning from farmers to solve problems and how both groups can work together. Scientists increasingly recognize that traditional farmers have detailed knowledge of agriculture and animal husbandry. This knowledge is based on experience and observations. Traditional remedies can be effective and researchers find that they work for sound scientific reasons. Traditional veterinary practices offer a particularly rich resource for development. Where livestock owners live too far from a clinic or cannot afford to pay for veterinary fees and medication, they are forced to rely on traditional treatments.

Ethnoveterinary medicine

The study of traditional veterinary knowledge, practices, and beliefs is called ethnoveterinary medicine. Whereas modern medicine classifies diseases according to their cause, ethnoveteri-

By rubbing an ailing sheep from head to tail with a large wooden spoon and an old sandal, a Quechua couple of highland Peru applies a magical cure designed to "squeeze" the illness from the animal's body (Photo: Constance McCorkle).

nary distinctions may be based on symptoms, epidemiological observations (how a disease is transmitted, how often it occurs, etc.) and supernatural causes (Mathias-Mundy and McCorkle forthcoming). A failure to understand these often elaborate explanations can hinder communication and cause misunderstandings between farmers and veterinarians trained in the Western mode. The type of veterinary care given to an animal depends not only on its economic value, but also on its status, the relationship between people and animals, and the contribution of livestock raising to the people's livelihood. American Indian culture, for example, recognized the idea of interspecies communication; horses received special attention and care (Lawrence 1988, p. 14). On the other hand, Andean agropastoralists in Peru manage their livestock rather extensively because they have to divide their time and labour between cultivating and herding (McCorkle 1982, p. 58).

People as well as animals

In some cultures, ethnoveterinary medicine and ethnomedicine overlap: healers may treat people as well as ani-

mals (Mathias-Mundy 1989, p. 55). In Nepal, for example, there are 14 types of healers who differ in their training and methods of treatment; all accept both human and animal patients (F.A.O. 1984a). Thai traditional veterinary medicine is another example of the overlap between ethnoveterinary medicine and ethnomedicine. Traditional medicine in Thailand is influenced by ayurvedic medicine brought from India by Buddhist monks (F.A.O. 1984b). This holds that human and animal bodies consist of four elements: earth, water, wind and fire. Imbalances among these elements cause illness; traditional treatments aim to restore the balance. Drugs include different parts and types of plants, parts of animals and inorganic substances. The taste of a drug determines its application. For example, disturbances in the earth element are treated with drugs with an astringent, sweet or salty taste. Medicines for the water element are characterized by sour and bitter tastes (F.A.O. 1984b, p.4).

Diversity of methods

"Ethnoveterinarians" diagnose, treat and prevent diseases in animals. Their diagnosis is influenced by the prevailing belief system and commonly relies on symptoms, post-mortem inspection of diseased animals and epidemiological observations. Treatment and prevention methods include:

- **Herbal and other medicines**
- **surgical methods** such as wound care, bone-setting, blood-letting and cauterization
- **management practices**
- **vaccination**
- **Magico-religious and symbolic practices.**



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Pharmacology – study of medicines – is probably the most widely investigated aspect of ethnoveterinary medicine. FAO, for example, has compiled lists of about 140 medicinal plants in Nepal and about 150 in Thailand (FAO 1984a and b). Many of these plants used by Fulani herders proved effective when scientists tested them in rats with intestinal para-

A Quechua shepherd of highland Peru displays a lamb lost to one of the many parasitic diseases plaguing the flocks (Photo: Constance McCorkle).



sites (Ibrahim et al. 1984). Amadou (1987) studied medical plants named by Mauritanian Fulani. He details the botanical descriptions, applications, preparations and active principles of 31 plants. He recommends 10 of them for use in treating eight livestock diseases.

The Dinka in Sudan

However, identifying useful herbs is just one part of ethnoveterinary medicine. Atet healers among the Dinka in southern Sudan are especially skilled in treating wound and abscesses, setting broken bones, obstetrics and castration. (Schwabe and Kuoajok 1981, p. 232). They treat cattle bloat either by feeding the animal a preparation made of pounded roots or by piercing the rumen with a spear. They use sterile cattle-dung ashes and cow's urine to dress wounds; they suture wounds with giraffe or cattle tail-hairs. They hold fractured bones in place with wooden or cane splints. The atet are one of four more-or-less distinct types of Dinka healers, each practicing on both people and animals. These healers have gained considerable anatomical knowledge from dissecting cattle and goats. They seem to have learned about human anatomy and physiology from comparison with animals. The atet and some cattle owners recognize several infectious diseases, including anthrax, bovine pleuropneumonia, rinderpest, foot-and-mouth disease, tuberculosis and fasciolosis. According to Schwabe and Kuoajok, many Dinka beliefs about these diseases are at least partially correct scientifically, while the reasoning behind their idea of disease caution and transmission may be different from the scientific explanation.

Identifying useful practices

Not all traditional practices are good and should be applied indiscriminately. Among the limitations of ethnoveterinary medicine are the inconvenience of preparing or using some remedies, the seasonality of certain plants, the lack of treatments against infectious epidemic diseases, the ineffectiveness or harm caused by some treatments, and frequently inadequate diagnosis (Mathias-Mundy and McCorkle, forthcoming). Detailed studies on the efficacy of ethnoveterinary drugs and techniques are needed to identify those useful in development efforts. Recording ethnoveterinary practices and disease classification requires skills in both veterinary medicine and anthropology. Several scientists (e.g. McCorkle 1989) see the combination of time-tested anthropological field methods with the technical skills and laboratory expertise of animal scientists and veterinarians as a key element in furthering the use of ethnoveterinary medicine in development. Ethnoveterinary practices potentially useful for development programmes include treatments for certain skin di-

seases, wound care, basic surgery, feeding strategies and management practices. Also suitable may be the three broad types of treatments in Thai traditional health care – against internal parasites, hormonal imbalances and physiological malfunctions (such as incorrect rumen pH in cattle) (FAO 1984b, p.9).

Epidemics and the fatal endemic diseases such as anthrax and other bacterial or parasitic infections are probably better treated by commercial vaccinations and drugs such as antibiotics. However, the economic importance of major epidemics is decreasing relative to the importance of other less easily recognized ailments: various respiratory diseases, insect- and tick-borne parasites, blood and gut parasites, viruses and deficiency diseases (Halpin 1981, p.2). This implies that ethnoveterinary practices may become more important in the future.

Prevention better than cure

Several authors (e.g. Halpin 1981) stress the importance of disease prevention rather than cure. Here too, ethnoveterinary medicine has something to offer. Many traditional management practices reflect a sound adaptation to the environment and may contribute to disease prevention. Examples are housing types, grazing strategies, supplementary feeding, and calf-rearing practices. Hence, indigenous management practices should be considered as alternatives or supplements to Western-style introductions.

Working together

Development projects can use ethnoveterinary practices in several ways:

1. Familiarity with indigenous practices will help development workers develop culturally appropriate measures and improve their ability to communicate with local people.
2. Development projects can select and promote ethnoveterinary practices, either alone or in combination with scientific veterinary methods. FAO (1984a), for example, recommends using traditional remedies, researching the pharmacological activity of medicinal plants, cultivating and distributing such plants, and teaching traditional veterinary medicine to veterinarians and other extension personnel.
3. Development projects can train local healers or livestock owners in basic veterinary methods. Models range from the full integration of trainees into existing veterinary services, to cooperation between the two groups. In the latter model, traditional healers continue their own activities, apply some Western treatments and request information from or refer patients to the veterinary service when necessary.

Almost 80% of the Nepalese farmers go to traditional healers before they consult

practitioners of Western veterinary medicine (FAO 1984a, p.3). Training these healers in basic veterinary medicine and supplying them with drugs could greatly improve the veterinary health care in rural areas. Dharni, the most popular healers in Nepal, already use some antibiotics (FAO 1984a, p.5).

4. Schwabe and Kuojok (1981) suggest that traditional healers can act as a disease intelligence system by reporting the incidence of diseases to veterinary authorities.

Guidelines and recommendations are needed to facilitate planners' decisions on whether ethnoveterinary practices should be integrated in development efforts, and which practices to promote. Such guidelines, however, can provide only general ideas which have to be fine-tuned to local circumstances. Veterinarians and their traditional counterparts can benefit from cooperating. But farmers stand to gain most. The people of Aramachay may well have presaged a new type of agricultural development: one based on traditional knowledge about livestock.

Evelyn Mathias-Mundy is associated with the Center for Indigenous Knowledge for Agriculture and Rural Development (CIKARD) at Iowa State University, 318 Curtiss, Ames, IA 50011, USA.

CIKARD collects, documents and distributes information on indigenous technical knowledge. The center welcomes contributions from those interested in all types of indigenous knowledge.

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Like the Andean men shown here, stockowners throughout the developing world typically perform practical necropsies on animals that die from disease, in order to continually add to their ethnoscientific knowledge of veterinary medicine (Photo: Constance McCorkle).

