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Sheep husbandry among Tzotzil Indians: who learns from whom?

Raul Perezgrovas, Marisela Peralta and Pastor Pedraza

• Introduction

The aims of agricultural technicians and development professionals are to help 'less fortunate' individuals to improve their crop or livestock production. However, it is easy to picture them in the field giving instructions, recommending hybrid seed, or new agrochemical/veterinary products, inspecting animals and writing prescriptions. But even if effective for the commercial producer, such knowledge and technologies are not always adopted by peasants or smallholder farmers, often because they simply cannot afford to.

Educated technicians are not used to receiving, let alone asking for, advice from peasant farmers. If they were to adopt a more humble approach they would probably find that farmers cooperate with them and they achieve better results. Local people may lack formal education but they have plenty of experience and empirical knowledge that technicians should look into and learn from. Using an ethnoveterinary approach, we were able to look deeper into indigenous knowledge, and to understand that we can learn a great deal about animal management and health when (and if) we listen carefully and respectfully to those who, educated or not, know better.

Our work among Indian shepherdesses in Highland Chiapas, in Southern Mexico, proved to be a most rewarding experience. Most of these women are illiterate, only speak their own language (*Tzotzil*) and live simple lives. They live in small hamlets in the mountains, and are responsible for daily household chores as well as grazing and watering the family flock.

The sale of sheep, wool and crafts provides an important source of income for Indian families in the Chiapas. Technicians from several government agencies have tried to raise the productivity of their sheep over the past few years. They attempted to introduce modern husbandry practices and highly productive sheep breeds; schemes that were effective for commercial producers in other regions. However in the Chiapas they have failed. The Indian farmers did not understand why their 'sacred' sheep should be harmed by injections, culled because of their age or low productivity, or killed for meat. They did not like the newly introduced breeds of sheep because they were always 'sad' and sick, and were often dead within a few weeks of arriving in the area.

• Research methods

During the early 1980s we tried a new method of improving sheep husbandry management with the Tzotzil Indians. Indian shepherdesses have been rearing animals for over 450 years in a different, but nevertheless successful way, so we studied their traditional management system. With the assistance of an Indian woman as an interpreter we talked individually to many shepherdesses from different villages. We walked with them whilst their flocks were grazing. We helped them to build wooden shelters for sheep and to gather plants and herbs for a sick animal. We sat for hours and chatted while some of the women transformed wool fibre into woollen garments, and we also shared scarce food and bad weather.

• Outcomes

As a result, we obtained plenty of useful information, which we discussed and analysed until the complete picture of the sheep management system became clear. More importantly, we underwent a change in attitude, becoming students whilst allowing the Indian women their role as expert teachers. We learned to observe carefully and to listen, and to respect their opinions.

It became evident why the original approach of the educated government technicians had failed. Without close contact with the shepherdesses, how could they have imagined that their recommendations were not only out of context but opposed to the culture of the Tzotzil Indians? In Highland Chiapas, sheep are sacred animals. They are named, cared for and respected as part of the family. The Tzotzils' religion prohibits the consumption of mutton and every Indian woman constantly prays to the Holy Shepherd, John The Baptist, for her sheep to be healthy and protected from 'wind' or 'evil eye'.

Besides this 'heavenly' protection, shepherdesses have designed and perfected a series of management practices that have proved to be very effective in keeping the animals in good condition. For example, parasites are controlled by rotating grazing sites, using grass-made muzzles, watering directly from buckets, and restricting access to meadows and streams. Nutritional imbalances are dealt with by supplementing the diet with mountain salt. Reproduction is managed by trading rams and isolating newly-lambded ewes, and sick animals are treated with plants.

These management practices are based on old pastoral traditions from Spain, ancient Maya customs or a blend of both. Furthermore, they can be scientifically translated into veterinary or animal husbandry terms. The whole management system is currently in the process of experimental validation, and the results will be used as the basis for future development programmes in the highland region.

This 'improved' traditional management system, along with a rediscovered local breed (Chiapas sheep), stands a better chance of being adopted by the Indian shepherdesses

since it came from them in the first place and because it is designed for the existing culture and context of sheep husbandry in the mountains of Chiapas.

- **Raul Perezgrovas** and **Marisela Peralta**, Universidad Autonoma de Chiapas, Campus III, Centro de Estudios Universitarios, San Cristobal de Las Casas, Chiapas, Mexico, and **Pastor Pedraza**, Unidad de Germoplasma Ovino-UNACH, Felipe Flores 14 San Cristobal de Las Casas, Chiapas 29200, Mexico.