

Chapter 5 EXTENSION

A REVIEW OF PAPERS PRESENTED IN THE
WORKSHOP SUBGROUP ON SOCIOECONOMICS AND
EXTENSION, PREPARED BY MARIE-LOUISE
BEERLING

5.1 Contributions to Animal Husbandry Extension in Qinghai Province

Introduction

Animal husbandry extension in Qinghai province is carried out by the field staff of the Bureau of Animal Husbandry (BAH). The bureau has no separate extension service. Although veterinary and grassland technicians are sometimes called animal husbandry extension technicians (AHETs), extension in the sense of communicating messages and ideas to herders is not their primary task. Their main responsibilities are disease prevention



and treatment, emergency control actions, the implementation and supervision of government programmes such as the Four-way programme and poverty alleviation programmes (subsidies and loans for fencing, pen building, winter shelters, distribution of grass seed, oat seed), and the collection of livestock census data. A review of institutions, present staff, present activities, and how extension is integrated with research is given in Matthewman (R1996).

Until recently 'extension' was used to describe the system of "passing on administrative instructions from a higher level to a lower level agency in our county" (Li and Wang, P21). Extension staff instructed the herders to carry out the initiatives identified by BAH and technical stations as being beneficial. This top-down approach worked to some extent in bringing the major livestock diseases under control. However, important changes are occurring that require a different, more persuasive style of extension to, for example, persuade herders to administer drugs to their livestock. These used to be available free of charge. Also the problem of rangeland degradation calls for an integrated approach in which cooperation with the herders is indispensable.

QLDP has supported training programmes to build up the extension capacity of BAH. Support was provided by outside experts (Matthewman R1996, R1997; King R1998, R1999; Van Wageningen and Sa, P58). The overall purpose was to make animal husbandry extension in Qinghai province more client-oriented and effective.

Extension education

Assessment

Matthewman (R1996) made an inventory of the existing situation. This included an assessment of herders' needs and the actual training level of field staff and their training needs and an appraisal of training institutes and their curricula.

It was found that there was considerable scope for improvement of the pre- and in-service training curricula for animal husbandry staff. They were strongly oriented towards animal health and production; and little attention was given to extension. There was a need to re-orientate current topics and add new topics on grassland management, animal nutrition, and extension. A participatory rather than the prevailing top-down approach was felt to be more suitable for delivering rangeland management extension messages.

It was recommended that all courses should add modules on 'information dissemination and extension methods'; 'communication methods'; 'rural information gathering'; and 'participatory planning'. Proposals were made for these modules to be incorporated into CASVM's (College of Animal Science and Veterinary Medicine) and HYSAH's (Huang Yuan School of Animal Husbandry) regular curricula. Matthewman also made suggestions for improving the in-service training of field staff and herder technicians.

Pre-service training

These proposals were further elaborated upon by subsequent consultancy missions (Matthewman R1997; King R1998) which led in 1999 to HYSAH adapting its current curricula. Li and Wang, both of HYSAH, have reported how awareness grew within the school that it could no longer ignore modern extension science. The impetus arose to integrate extension in all four major courses taught at the School (Li and Wang, P21). The incorporation of the new curriculum and associated teaching plan was facilitated by QLDP, which funded short-term and MSc training courses in extension science for several of the school's teachers.

The new course has been taught to final year students majoring in veterinary medicine, grassland management, animal husbandry and animal health, and livestock production since 1999. All new field staff will now have at least some notion of client-oriented extension. Preparations are underway to establish a Department of Animal Husbandry Extension to allow students to major in extension. No problems are anticipated with approval of the curriculum, teaching plan, and text books (per. comm., Wan Yongfeng), and it is expected that HYSAH will begin the training of fully-fledged extensionists from 2001 (Li and Wang, P21).

In-service training

The project provided training in modern methods of extension as in-service training for field veterinary and grassland technicians (King R1999). The training was both theoretical and practical. In the practicals the trainees worked with herders on various participatory rural appraisal (PRA) exercises. Both the trainees and the herders were enthusiastic about this new method. The field staff were convinced that it is a simple, effective, and useful methodology and wish to use it in their work (King et al. P18).

The basic principle behind PRA is that local people know a lot about their environment and this knowledge should be mobilised to analyse problems and arrive at solutions. It presupposes a willingness to listen and takes the priorities of the local people into account. A variety of tools is used to put people at ease and make them talk about their environment and their lives. Information about land use and land degradation can be collected from conducting mapping exercises and by walking along transects. A better understanding of the herders' lives and their labour dynamics can be derived from drawing up calendars and daily activity diagrams. The herders' opinions on government services, institutions, and programmes can be drawn up in Venn diagrams. Herders' problems and development priorities can be identified from ranking exercises (Sa and King, P54). There are many other PRA tools; and, as PRA is a flexible and dynamic method, new tools can be developed 'on the spot'. PRA methods do not always take more time than traditional ways of gathering data. They are intended to make extension work more efficient, and, by virtue of actively involving local people in the process, they are also more effective.

In 1999 sixteen field staff and two provincial staff from BAH and QLDP were trained in PRA methods. A further 56 staff were trained in 2000 (pers. comm. A. King). Seventy-four extension workers are now familiar with the basic principles of participatory approaches to extension. Also, 200 leaders and herder technicians from the six project townships attended a lecture on 'extension methodology, PRA and extension evaluation' from 1999-2000 (Wester Pers. comm). It is hoped that these efforts will mean that extension becomes more client-oriented.

Extension implementation

Extension materials

QLDP supported the development of a range of extension materials for use by BAH field staff (Wester R1999). The most notable was the 'Illustrated Handbook for Sheep and Yak Herders'. This was prepared with contributions from many researchers, field staff, and consultants. The booklet was made user-friendly; being small, easy to carry, with lots of self-explanatory pictures that cover the technical advice that is delivered during demonstrations and field days. The booklet serves as a reminder for herders who have attended demonstrations.

The handbook was produced as a concrete example of a client-oriented mass medium. However, it has been disappointing that so few herders have purchased it. Although extension staff see the book as simple, cheap, and very practical, the herders have been hesitant to buy it. One reason given is that herders feel they should not be paying money for information that originates from the government (van Wageningen and Sa, P59). It is good to keep in mind that in extension terms an uptake of 20% in the first year is quite good (personal communication, J. Groome).

The handbook was developed by first identifying the Tibetan herders as the users of the proposed publication (van Wageningen and Sa, P59). The book aimed to take into account their usual form of communication, their environment, and their problems. The topics were chosen to be relevant to the herders and only practical advice that the herders could feasibly follow was included. The topics were organised to link up with the main topics of

the extension programme, covering parasites, oats, and young stock diseases, plus some awareness raising on grassland management (van Wageningen and Sa, P59).

The text was kept to a minimum, with two editors cross-checking to ensure cohesion between Chinese and Tibetan. The field testing of messages and pictures revealed some interpretation difficulties, especially with drawings explaining abstract ideas, such as balancing livestock numbers with feed resources, deficiencies of micro-elements in feed, and timing of activities. Difficulties were also found with understanding the text where complicated or non-local terms were used such as with the names of parasites. The necessary adaptations were made and 6,000 copies of the book were printed. These were distributed to the counties for sale to herders at a subsidised price of two yuan each.

Use of new extension methods in the field

Sa and King (P54) have developed examples of how PRA techniques can be used in the field. However the authors are not convinced of the practicality of their application in QLDP, although it is clear that the herders must have an active role in extension activities (Sa and King, P54). The problem is that not enough experience has been gained with practical applications of PRA in the ongoing extension programme and more guidance is needed for field staff to integrate PRA into their regular work.

Xue and Lu of Guoluo Veterinary Station in their paper (P64) report experiences with new extension approaches, use the term 'participation style of extension' rather than PRA. They recognise that herdsmen should be encouraged to analyse their own problems through brainstorming and other types of exercise, and the herdsman's wish should be the working goal of extensionists. The same paper also describes how new extension methodologies have been used in their field work. Problem identification was done with herders as 'herdsmen know best the practical difficulties they confront.' This resulted in the priority for intervention being assigned to young stock diseases and parasite-borne diseases.

The extension messages have been designed as a comprehensive package to solve these problems. A layered system of training, demonstration, and extension has been used with the collaboration of administrative leaders and extension experts enlisted to increase the level of contact with herders. Xue and Lu also say that the extension agents should have a responsible attitude and should listen patiently to the herders' problems to enhance the herders' interest and participation. One-off training sessions on new extension techniques can only set the base and there needs to be follow-up training, preferably involving extension agents interacting with the herders to find out about herders' lives and problems. QLDP has encouraged extension agents to constantly reflect on their experiences as extension must be seen as a learning process that needs continuous reinforcement.

Extension organisation

The field work in the project area has become more structured. Extension campaigns are now planned as integrated packages to disseminate the main messages of parasite control, young stock disease control, and forage cultivation. Two teachers from the School of Animal Husbandry have been seconded to improve the quality of county-level extension training. The training system now incorporates group discussions with herders, demonstrations,

and herder feedback, while occasionally herders are invited to lecture in front of their fellow herders, and a herder study tour has been organised.

Links have been strengthened between research and extension. Research has become more problem oriented and focuses on the three priority research areas for herders (parasites, young stock diseases, and fodder shortage). QLDP has promoted and facilitated on-farm trials that involve both extension staff and herders (Wester, Pers. comm.). It has resulted in advice that is both adequate and appropriate at herder level. Also, the existing structure of relaying innovations from province and prefecture levels down to township and association levels has been reinforced.

Impact of the new methods

The new extension package has been working since 1997 to communicate techniques and benefits of parasite control, young stock disease control, and oat planting. Zhang (P80) has evaluated its impact by investigating the economic benefits experienced by the herders overall from the integrated package.

Zhang found that herders who have applied all three techniques have had higher young stock survival rates and lower adult mortality rates than herders who have not applied the techniques. The benefits accrued in terms of herd increase, valued at market prices, outweigh the cost of inputs such as labour, seed, antibiotics, anti-parasite drugs, and treatment fees against. It is calculated that the typical 'model' herder has made a net gain of 241 yuan per year¹ from adopting all three messages simultaneously.

This form of impact measurement is popular within BAH (Sa and King, P54 and Xue and Lu, P68, and many of the technical papers on animal health). However, it is of limited validity, since the calculations are based on simple assumptions that equate economic benefit with the cash value of surviving animals. This is an over-simplification as herders do not look at their animals as mere meat producers, but as multipurpose animals. Milk and dung are important by-products without which a herder family cannot survive, and these benefits have not been included in the calculations. Calculations of economic benefit should also account for other factors.

This approach was first attempted by Dideron (R1995) who proposed typical household models for each of the six socioeconomic strata using production and consumption data gathered from interviews (Dideron R1995). Zachernuk, on the basis of a more elaborate data base, used mathematical modelling to try and assess the impact of different strategies and policies on the development of household economics over a 10-year period (Zachernuk R1998).

5.2 Herders' Attitudes and Perceptions

Socioeconomic investigations

For their extension messages to be relevant and appropriate extensionists need to be well-briefed on the background situation of their target group. They need to know not only about

¹This figure has been corrected as there was a calculation error in the original paper.

the physical and climatic conditions, but also about the herders' way of life, and their perceptions and attitudes. These factors must be taken into account to gain herders' confidence.

QLDP carried out many investigations to find out about the herders' lives and their perceptions and priorities. These took the form of socioeconomic studies (Dideron R1995, R1997; Zachernuk R1998, R1999) by interviewing herders in their homes (Matthewman R1996; King R1998; Goldstein R1996; Beerling R2000) and training (King R1999; Wester, Pers. comm.).

These studies indicate that 30 to 50% of herder families (depending on township) are hardly able to assure the subsistence of their families. One characteristic of such families is that they generally lack adequate labour. This seriously limits their economic scope. The yak is considered as the prime necessity of life. The herders aim to have as many animals as possible to ensure that they will still have a productive nucleus after snow disasters or drought. They are aware that the grassland has a limited carrying capacity, but, given that they need their animals for their own survival, they are not keen to reduce animal numbers. Rather than reducing their number of animals the herders look to seasonal migration to other areas, renting other land, the communal management of summer pasture, growing fodder or reseeding to address the limited carrying capacity problem. Awareness of this reality should make it possible for the authorities to work with the herders to find sustainable solutions to their multiple problems.

A workshop discussion paper argued that despite all the socioeconomic work, the distance between extension, research and policy, on the one hand, and the reality of the herders, on the other, still persists (Beerling R2000). This has led to misunderstanding of and the insufficient focus of extension efforts. Some officials still believe that herders are ignorant as they do not want to listen to sensible advice. These findings were confirmed in the workshop discussions. Force is still, at times, considered a highly effective extension method, and the idea that more sustainable solutions may be obtained if the herders' views are taken into account is difficult for some officials to accept.

Jianshe workshop

In September 1998 QLDP organised a participatory resource planning workshop at Jianshe (van Wageningen R1998). At this workshop herders, extensionists, and leaders sat together as stakeholders to discuss and evaluate the options for sustainable improvement of the townships' resource bases.

The workshop first sought feedback on BAH's interventions on animal disease and parasite control; oat planting; fencing; animal shelters; black beach control; rangeland regeneration; and rodent control. The following four themes were addressed at the workshop: improving animal production, stopping range degradation, improving degraded land, and increasing herders' knowledge. Participants were asked to describe the situation, analyse the causes and effects, propose solutions, and draft an action plan for each theme.

This was a new approach and, in spite of some concerns about the expense of this exercise (pers. comm. N. van Wageningen), it did prove to be a very valuable experience. It yielded some valuable insights into involving herders in developing improvement strategies.

Income generation through weaving

Herders frequently mention their lack of money as a constraint to making investments. The BAH's focus on enhancing livestock productivity to increase herders' income is not a feasible option for herders who live on or below the subsistence level. Such herders need to develop sources of income other than livestock production.

Cottage crafts offer one way of earning supplementary income. Weaving, which is traditionally done by women using yak fibre and sheep's wool, has good potential. QLDP supported weaving as an income-generating activity by providing two consultants (Dunsmore R1998; Beerling R2000). Their investigations showed that technically and commercially there was good potential for weaving. No socioeconomic factors were identified that would impede the further development of market-oriented weaving (Liu and Beerling, P32).

A workshop was held to train ten Tibetan weavers from two townships in new weaving techniques. Weaving is based on local knowledge and skills and fits in with what women want from their lives. The women weavers were encouraged to contribute to the planning and design of development activities by consulting them about how to set up a pilot project and by listening to their views on production levels and prices (Dunsmore R1998). A proposal for a pilot project has been prepared and submitted for funding (Beerling R2000).

This has been the only QLDP activity directly targeted at women. Otherwise the up to 20% of Guoluo prefecture households that are female-headed and mostly poor (Zachernuk R1999) have not been targeted by BAH's extension activities.

Discussion

Discussion during the workshop centred on PRA and its usefulness for animal husbandry extension in southern Qinghai, and the question of how well extension fits in with the situation of the herders.

PRA is a controversial subject within BAH. It has been largely misinterpreted as only involving talking with herders, and has not been seen as something that helps to achieve the BAH's main goal of solving the problems of animal productivity. It is also seen as taking up too much time. BAH staff believe that, although talking with herders is a good way to identify constraints, it is not useful to solve the problems of parasites, diseases, overstocking, and range degradation. PRA is viewed as difficult to use in the field. A need was expressed for new basic extension techniques that are simple, easy to use, and practical. The Herders' Handbook and Participatory Planning Approaches (Sheehy R2000) to range degradation were mentioned as examples.

The scepticism about PRA indicates the need for more practical guidance about how to use PRA tools in the field. The veterinary and grassland technicians do not see how PRA can assist them to carry out their everyday duties. Perhaps there was too much focus on diagrams, calendars, maps and matrices made during the training when the main issue was really 'more modern methods of extension'. PRA is just one such method. It was therefore suggested that rather than 'PRA', other terms such as 'client-oriented extension', 'target group oriented extension' or 'participatory style of extension' should be used.

Field staff meet a number of difficulties when trying to solve the problems of animal productivity. Although the problems are known and solutions exist, herders sometimes fail to show up at extension sessions, or do not apply the extended techniques. Workshop participants suggested that this was due to reasons such as the non-availability of drugs, lack of money to pay for inputs, little understanding of the benefits, unwillingness of herders to invest, and, on the extension side: insufficient explanation, not enough time and effort put into the extension effort and too many herders to contact. It was proposed that increased funding and better transport facilities for extension field staff would go a long way towards overcoming these difficulties.

A failure to consider the herders' priorities might also have led to the low impact of extension efforts. For example, some of the extension campaigns coincided with the highly profitable caterpillar fungus collection season. Extension programmes should be scheduled outside of the herders' busy times.

In conclusion it can be said that QLDP has brought a number of innovations to southern Qinghai's extension system. They have only been recently introduced and there has not been enough time to gauge their lasting impact. Their introduction needs to be better facilitated by increased government funding to provide adequate resources for field staff.

Also, it is crucial that extension messages are well developed and appropriate. These messages are mostly the outcome of scientific research; and therefore it would be beneficial if the researchers also became acquainted with PRA and how to use it to involve herders more in the design, execution, and evaluation of trials.