

Letters to the editor

A comment on 'Vicuñas in Bolivia: an opportunity for their sustainable use' by B.G. Meerburg and R. de Jong

from G. Lichtenstein and N. Renaudeau d'Arc

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Sir, In their article Meerburg and de Jong (2003) conclude that the captive system promoted by the National Institute of Agricultural Technology (INTA) in Argentina provided an opportunity for vicuña management in Bolivia. This conclusion appears to be based on a rapid rural appraisal (RRA), a written questionnaire (12 local inhabitants in Los Lipez, Bolivia), a visit to one producer and the INTA Abrapampa. These authors' findings are quite the opposite of those we have reached in our extensive study of vicuña-management systems in these countries, and we believe the evidence presented by Meerburg and de Jong needs to be challenged.

According to our studies, captive management in Argentina does not have the capacity or scope to conserve wild vicuña populations outside corrals, to change local people's attitudes towards vicuña conservation, or to enhance the livelihoods of poor local people. Community management of vicuña in the wild, however, as adopted in Bolivia, has both the scope and potential to meet these objectives (Lichtenstein and Renaudeau d'Arc, 2004). We believe that this discrepancy in research conclusions is the result of methodological weaknesses in Meerburg and de Jong's study, the most important of these being the short time in the field and the small number and limited range of experience of the representative stakeholders interviewed.

The very limited literature review in Meerburg and de Jong's work leads the authors to overlook the empirically supported theory that has evolved. Their main focus is on the production system developed for vicuña in each country, without taking into account how different structures of property rights can affect the long-term conservation of vicuña and the allocation of benefits from vicuña use to local people. The authors seem to overlook the following factors:

(1) The overall goal of management plans is to enhance the conservation status of vicuñas as a threatened wild species near extinction. The impact of captive management on vicuña conservation is questionable (FWS, 2002), the biological impact on the enclosed populations is negative (Lichtenstein and Vilá, 2003), and the scope of 20 ranch owners to protect vicuñas in an area of the dimensions of the Puna is very limited.

- (2) Captive management has not proved to be 'a more efficient vicuña production system' than wild management. Experience in Peru has shown that the economic returns of wild management can be much higher than those of captive management, whereas the biological impact is much lower (Lichtenstein *et al.*, 2002).
- (3) The 'organized credit supply' in Argentina implied that producers could sell fibre only to the company that gave them the loan on materials for the fence. The price paid for the fibre by this company was far less than that paid by other companies (Lichtenstein and Vilá, 2003).

An economic assessment of the viability of the captive-management model in Argentina revealed that the annual costs exceed revenues, except in the most favourable scenario where there is no need for additional water supply or food supplementation and the costs of capital and of labour for tending the vicuña are ignored (McNeill and Lichtenstein, 2003). By 2001, 38% of the breeding ranches had been closed down. The ones that remained open seemed to be those that: (1) had low operating costs; (2) were able to subsidize vicuña use by other economic activities; and (3) enjoyed returns from other activities (such as ecotourism) besides selling vicuña fibre to the processing company.

Whilst we agree with Meerburg and de Jong (2003) that more efforts are needed in Bolivia to guarantee the realization of economic benefits, and that local processing and marketing of fibre is essential, our studies demonstrate that the INTA captive-breeding model is not the one to be followed.

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The author responds

from B.G. Meerburg

Dr Meerburg is with the Animal Sciences Group, Wageningen University & Research Centre, PO Box 65, 8200 AB, Lelystad, The Netherlands. E-mail: Bastiaan.Meerburg@wur.nl. His co-author, R. de Jong, sadly died shortly after publication of the article in Outlook on Agriculture.

Sir, The main goal of our article (Meerburg and de Jong, 2003) was to address the possible role of the vicuña in improving the economic position of the rural Andean population whilst bearing in mind the endangered status of vicuña. Our main conclusion was that opportunities existed for economic exploitation of the vicuña, using the 'INTA captive model' as a more intensive alternative to traditional community-management systems. Other captive models, such as the MUS-model in Peru (funded by Conacs) and the confinement model in Chile (as, for example, mentioned by Vilá *et al*, 2003) were not considered in our study.

In our section about current production systems, we stated that in Los Lipez, Bolivia, only one *chacu* (communal effort to capture vicuñas) was held in 1998. From then until 2001, when our research was conducted, no further *chacu* were organized. One cannot conclude from this, therefore, that community management of vicuña in the wild, as adopted in Bolivia, is the method with the scope and potential to enhance the livelihoods of the local poor people, as later claimed by Lichtenstein and Renaudeau d'Arc (2004).

In 2001, the INTA captive model still looked promising, and it was, therefore, the one used in our article as the model for future vicuña-production systems. In our conclusion, however, we stated that a number of preconditions had to be addressed before full economic benefit could be gained with the INTA model. These included information exchanges between pilot areas concerning proper credit supply, provision of shearing tools, and for wool collection. It seems clear now from the work of Lichtenstein and Vilá (2003) that these preconditions have, unfortunately, not been fulfilled.

It is generally considered within the MACS programme that exploiting vicuña in captivity by fencing wild vicuña or similar approaches is not compatible with the first principles of sustainability (Bonacic and Gimpel, 2003). Reasons often mentioned for not practising captive management are inbreeding and genetic drift (see, for example, Puig, 1998; Wheeler, 2002). However, if genetic resources are exchanged between different captive populations and countries, it is hoped that loss of genetic diversity can be minimized.

In my opinion, running both models – one based on

the capture and release of small groups of vicuña involving minimal interference with the natural population, and another based on the use of captured stock (such as in a proper working INTA-model) – alongside each other might usefully combine the sustainable use of natural resources with improved economic returns. In this way both objectives of the Vicuña Convention – the sustainable use of wild species and improving benefits to the rural populations – could be fulfilled.

As to the 'methodological weaknesses' mentioned by Lichtenstein and Renaudeau d'Arc, our survey had to be performed in a short time (two weeks) and with only minimal funding. We were obliged, therefore, to adopt the methodology described in the article. Nevertheless, I think our results and conclusion gave a clear overview of the situation in 2001.

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