

Herd Growth and Population Development in Camels (*Camelus dromedarius*) - A Neglected Research Agenda

Horst Jürgen Schwartz, Anas Sarwar Qureshi

Humboldt-Universität zu Berlin, formerly Dept. of Livestock Ecology, Germany

University of Agriculture Faisalabad, Anatomy, Pakistan

Abstract

The scientific interest in camels (*Camelus dromedarius*) has been increasing dramatically in the past three decades as the steeply rising number of publications on this subject demonstrates. Parallel the camel has gained economic importance in many African and Asian countries with large arid and semi-arid areas which lend themselves to efficient exploitation through camel husbandry. Furthermore new, intensive camel production systems are emerging and new camel products are becoming of interest for certain high price markets. This raises the interest in the expansion of camel populations. One of the key constraints to faster expansion of camel herds is the well documented slow reproduction. Consequently, considerable research effort has been successfully expended on the biology of camel reproduction ranging from behavioural, hormonal, physiological, histological and medical aspects to the adoption of modern breeding techniques such as artificial insemination and embryo transfer. However, not much of this research was carried out under field conditions or with larger numbers of animals and the impact of its results on the vast majority of camel herds existing in marginal and remote areas has remained minimal. We discuss the effects of other than the inherent biological constraints of camel reproduction arising from the management systems applied, the prevalent production objectives, the degree of commercialisation of production and market integration, and from the seasonal and annual fluctuations of environmental conditions. We formulate relevant research needs with specific emphasis on applicability in production environments. We outline possible research project approaches and we examine potential benefits to camel producers.

Keywords: Camels, herd growth, non-biological reproduction constraints, research needs