

# ELMT “GOOD PRACTICE” BIBLIOGRAPHY

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## CAMEL HEALTH AND HUSBANDRY

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### A. INTRODUCTION

Pastoralists in the Horn of Africa have benefited from the camel for a long period of time due to its unique adaptability to the harsh environment, its drought tolerance, reliable milk and meat supply and ability to feed on a wide variety of plants. However the camel as a major source of livelihood is becoming more and more important in the arid and semi arid lands (ASAL) of Africa and especially in the greater Horn of Africa and camel husbandry is increasing in these areas and now includes traditional cattle keeping communities such as the Masai, Samburu and Boran.

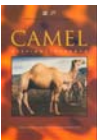
Despite its growing importance, knowledge on camel husbandry and health is still very limited. Most of the research conducted so far has been done on physiology, anatomy, reproduction and has focused more on camels kept on the Arabian Peninsula for recreational activities, than those kept as a source of livelihood. Knowledge on camel husbandry practices and diseases especially in the pastoralist set up is still very patchy and insufficient; however there are publications available that give a good overview on this topic and can be used as a reference guide.

### B. USEFUL DOCUMENTS (in alphabetical order)



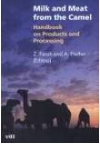
***Camel Husbandry and Production, best practices from FARM-Africa's Pastoralist Development Project in Kenya***

This series documents the best practices and lessons learned from the Camel Improvement Project, which later became the Pastoralist Development Project (PDP). This was FARM-Africa's first undertaking, which began in Kenya in 1988 and ran for 12 years. The PDP Best Practices series comprises five booklets: Animal Health, Camel Husbandry and Production, Micro-enterprise Development, The Mobile Outreach Approach, and lastly, Natural Resource Management. Through these, the series documents how the project progressed and the lessons it learned along the way, presenting the 'best practices' that evolved from the work. The complete version of this document is available in PDF format (27 pp; 511Kb) at this link: <ftp://ftp.fao.org/docrep/nonfao/LEAD/X6172e/X6172e00.pdf>



**Evans, J.O., Simpkin, S.P., Atkins D.J., (Eds), 1995, *Camel Keeping in Kenya, Range Management Handbook of Kenya, Volume III,8, Ministry of Agriculture, Livestock Development and Marketing, GTZ***

This manual was compiled at the request of the then Ministry of Agriculture, Livestock Development and Marketing (MALDM) and the GTZ funded Kenya Range Management Handbook Project. The database was intended for policy makers and for the wider public including the pastoralists. It gives an excellent overview of the camel in general, nutrition, purchase and management, breeds, physiology and reproduction, health management as well as advice on proper data collection and herd monitoring. As this volume was produced almost 15 years ago, only hardcopies are available. However, lately efforts have been made to secure the valuable information in digital form. For more information kindly contact [igluecks@vsfsuisse.org](mailto:igluecks@vsfsuisse.org)



**Farah, Z., Fischer A., 2004, *Milk and Meat from the Camel, Handbook on Products and Processing*, vdf Hochschulverlag, ETH Zurich, ISBN 978-3-7281-2527-9 or as ebook**

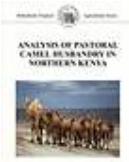
The book is based on results of research work carried out in partnership with universities, camel farmers and pastoralists in Eastern African countries. The first part deals with chemical composition, technological properties, hygienic safety and quality control of camel milk. This is followed by the presentation of processing methods for different dairy products which should allow smallholder producers to process milk on-farm or in centralized small scale dairy units.

In the second part special knowledge gained in slaughtering, de-boning and processing of camels on-site over several years of long-term stays on the Ol Maisor Farm in Kenya is presented. During the development of camel meat products the authors set a great value on the quality of the products as well as creating a wide range of products with low and high cost for the local market and a good shelf life.

The book presents background information and recipes on the manufacture of camel milk and meat products and it is intended as a practical guide to professionals, government bodies and development agencies interested in building up small scale processing units for camel meat and milk products. It is hoped that it may also serve as a reference for extension personnel working with camel herders, food scientists and students.

**HIGGINS, A., (Ed), 1986, *The Camel in Health and Disease*, Baillière Tindall, ISBN 0-7020-1167-3**

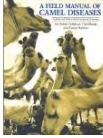
The book is a compilation of a series of eight papers by different authors published in the British Veterinary Journal and focusing in six chapters on specific diseases and parasites of the camel such as protozoal diseases, helminthes, ectoparasites, infection diseases, reproductive disorders and surgical conditions, and covering aspects on husbandry and management. The target group for this book would be veterinarians involved in camel work.



**Kaufmann, B.A., 1998, *Analysis of pastoral camel husbandry systems in Northern Kenya*, Hohenheim Tropical Agricultural Series 5, Markgraf Verlag, ISBN: 3-8236-1286-7**

This study is focused on camel husbandry systems in Northern Kenya trying to understand the interrelationship between production conditions, management and production. Three different camel husbandry systems in northern Kenya (Somali, Gabbra and Rendille) were analyzed, using a combination of participatory techniques and bio-economic modeling. The multidimensional analysis of the different systems on the three levels (management, production and productivity in relation to production conditions) yielded knowledge on the determinants interrelationships and bottlenecks in the systems.

The methodology developed provides a tool for time and cost effective analysis of extensive livestock production systems as a prerequisite for successful interventions. The detailed description of the methodology adds to the usefulness of the book for researchers and development planners aiming at applying the tool for the analysis of other extensive animal husbandry systems.



**Koehler-Rollefson, I., Mundy, P., Mathias, E., 2001, *A field manual of camel diseases: Traditional and Modern Veterinary Care for the Dromedary*. ITDG Publishing, London, UK, ISBN-10: 185339503X**

*A Field Manual of Camel Diseases* is the first practical guide to camel diseases designed for use in low technology environments. The manual details some 80 major camel diseases and conditions, ranging from abortions to wry neck syndrome. For each disease, the authors give the disease signs, its causes, and simple prevention and treatment methods. Both scientific and tried and tested traditional treatments are presented, thus enabling the veterinarian or livestock practitioner to make the most appropriate choice in the prevailing circumstances. A section on procedures explains how to examine a camel, take samples for laboratory analysis and apply various types of medicines.

**Schwartz, H.J. and Dioli, M. (Eds) 1992, *The one-humped camel in Eastern Africa - A pictorial guide to disease, health care and management*. Verlag Josef Margraf, Berlin, Germany, ISBN-10: 3823612182**

This book presents information on the camel in eastern Africa. Distribution, adaptation to arid environments, feeding behaviour and nutritional physiology, products, performances, economic importance, productivity, traditional and modern management practices, diseases, health care and post-mortem procedures, are treated with special reference to eastern Africa. The book is famous for its photo collection, especially for camel disease and serves as a good reference guide.



**Wernery, U. and Kaaden O.-R. (2002) *Infectious Diseases of Camelids*, Blackwell Science Berlin Vienna, Boston, Copenhagen, Edinburgh, London, Melbourne, Oxford, Tokyo, Georg Thieme Verlag, 2<sup>nd</sup> Edition, ISBN 3826333047, 9783826333040**

The second edition of this book is a very useful and up to date source for infectious diseases in the dromedary camel. It gives an overview on diseases caused by virus, bacteria, fungi and parasites and has a very well written introduction on the camel in general. It is useful reference book for veterinarians, students and anyone involved in issues on camel health.