ANIMAL TRACTION

1. Overview

Since the 1960s, animal traction has been largely ignored by agricultural research, extension and training organizations in South Africa. Other African countries have since the 1980s been devoting funds and personnel to animal power research, development and extension programmes. In 1990 the Animal Traction Network for Eastern and Southern Africa (ATNES) was formed to link animal traction specialists in the region. National animal traction networks were formed in several African countries.

In 1993 a national one day workshop was organized by the University of Fort Hare and hosted by the Development Bank of Southern Africa (DBSA). This workshop was attended by some 50 people from all over South Africa as well as representatives of ATNES. The workshop resolved to form a national network: The South African Network of Animal Traction (SANAT) with a view to improving the knowledge and information exchange and to promote relevant research, development, training and policies concerning the use of draught animals.

In 1993 the Animal Traction Centre (ATC) at Fort Hare University in the Eastern Cape was established using funds provided by the Chairman’s Fund of Anglo American. This Centre was started with a view to providing a centre with trained animals and personnel where training and research in animal traction could be conducted.

In 1994 SANAT conducted a national animal traction survey throughout South Africa aimed in the long term at improving small farmer productivity and raising rural living standards through the use of animal power for transport and crop production. The immediate objective was to provide a publication that gave a clear overview of the current status of animal traction in South Africa. This survey revealed that throughout the rural communities of South Africa about 60% of the rural farmers were using animal traction. It also revealed that draught animal power was being re-introduced on some large scale commercial farms to reduce the heavy mechanization costs resulting from increases in fuel and machinery prices.

Since 1994 SANAT and the ATC, where SANAT is currently based, have worked together to network throughout the country and to provide training and research in animal traction. SANAT has up until the present time encouraged the National Department of Agriculture (NDA) to become interested in draught animal power as a power option for small farmers. There are indications that the NDA is becoming interested while a number of regional departments of agriculture are supporting animal traction initiatives in their provinces.
2. National and Regional Strategy and Relevant Directorate in the Department of Agriculture

The National Department of Agriculture has established a division which is looking into the use of animal traction as a complimentary power source to agricultural tractors. This division is based with the Agricultural Research Council (ARC) at the Institute of Agricultural Engineering in Silverton.

(SANAT) is currently assisting the National Department of Agriculture in the preparation of a National Policy Document, which will provide a strategy where by animal traction and related issues can be managed both Nationally and Regionally. The Traction Centre (TC) at Fort Hare University, which incorporates the ATC is recognized and supported financially by the Eastern Cape Department of Agriculture.

3. Education, Training and Extension

Education, training and extension in the use of agricultural tractors are offered at agricultural schools and college as well as by the agricultural faculties of Universities in South Africa. Training of extension officers and farmers in the use of tractors and related equipment is available on a nation wide basis. Extension in tractor powered mechanization is freely available throughout the country.

The same cannot be said for draught animal powered mechanization. During the last forty years education, training, research and extension in the use of draught animals has declined until recently with the institution of SANAT and the ATC at Fort Hare University, it was virtually non existent. Surveys and investigations carried out by SANAT in recent years have clarified the situation with regard to these issues and provided recommendations for rectifying the situation. SANAT is currently negotiating with the NDA with regard to setting up training and research and extension centres in the use of draught animal power

The Traction Centre at Fort Hare University which includes the ATC currently provides training, research and extension in draught animal power in the Eastern Cape. The centre is supported and financed by the East Cape Department of Agriculture.
4. Research

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University of Pretoria, Faculty of Veterinary Science, Onderstepoort. Tel 27 12 529 8000 Fax: 27 12 529 8300

Sustainability Institute, University of Stellenbosch, PO Box 162, Lynedoch 7603. Web Site: www.sustainabilityinstitute.net Tel: 27 21 881 3196 Fax: 27 21 881 3294

5. Publications and Websites

Find details of the info Paks available from the National Department of Agriculture. We Site: www.nda.agric.za/publications

Animal Traction In South Africa, Empowering Rural Communities, compiled and edited by Paul Starkey (Obtainable from Email: sanat@ufh.ac.za Tel: 27 40 602 2125).

Improving Animal Traction Technology, Animal Traction Network for Eastern and Southern Africa (ATNESA), Paul Starkey, Emmanuel Mwenya and John Stares (editors). (Obtainable from Email: sanat@ufh.ac.za Tel: 27 40 602 2125).

Meeting the challenges of Animal Traction, Animal Traction network for Eastern and Southern Africa (ATNESA), Paul Starkey and Pascal Kaumbutho (editors). (Obtainable from Email: sanat@ufh.ac.za Tel: 27 40 602 2125).

Animal Traction in Development, South African Network of Animal Traction (SANAT), Timothy Simalenga and Bruce Joubert (editors). (Obtainable from Email: sanat@ufh.ac.za Tel: 27 40 602 2125).

Conservation Tillage with Animal Traction, Animal Traction Network for Eastern and Southern Africa (ATNESA),PG Kaumbutho and TE Simalenga (editors). (Obtainable from Email: sanat@ufh.ac.za Tel: 27 40 602 2125).

Empowering Farmers with Animal Traction, Animal Traction Network for Eastern and Southern Africa ATNESA, PASCAL Kaumbutho, Anne Pearson and Timothy Simalenga (editors). (Obtainable from Email: sanat@ufh.ac.za Tel: 27 40 602 2125).

Find information on (ATNESA) and for (SANAT) on Web Site: www.ATNESA.org
6 Animal Traction and the Commercial Farmer

A few commercial farmers in South Africa are using animal traction to supplement their tractor operations and reduce operating costs. Typical activities are transporting of farming inputs, produce and fodder, spreading fertilizer and manure and cultivating weeds.

7 Animal Traction and the Emerging Farmer

Animal Traction is often considered as being a power source, which is most suitable for subsistence agriculture. Recent studies into farming vegetables under irrigation on a two hectare land have revealed over a period of 10 years that it is possible to earn a net income in the region of R 100 000 per annum from such an area. It is therefore recommended that animal traction has an important role to play in the development of emerging farmers entering commercial agriculture. The initial capital investment is about one third what it would be using tractor powered mechanization and thus presents a much lower investment risk, while the running costs are likewise much lower. This enables the emerging farmer to compete on the open market with large scale commercial farmers.

8 Animal Traction and Subsistence Agriculture

Animal Traction is particularly relevant to subsistence farmers. The issue however is that most subsistence farmers work small pieces of land which are difficult to manage with conventional animal drawn ploughs, harrows, planters and cultivators and the numbers of animals, which are needed to pull these implements. Many subsistence farmers are women who are helped by children. Donkeys, which are easier to handle for women and children and smaller light weight equipment is needed for this type of farming. Such equipment has been and is still being developed and is becoming available to subsistence farmers in South Africa.

9 Associations, Networks and Companies involved

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National Council of SPCAs, Farm Animal Unit, Tel: 011 907 3590/1/2 Mielie Brand, PO Box 12518, Benoryn 1504, RSA. Email: maxtrade@global.co.za Tel: 27 11 963 1335 Fax: 27 11 967 1633
10 Indigenous Knowledge

Animal Traction is a dying art or skill, for a generation many people in South Africa have grown up without knowing of its existence. There are however a large number of senior citizens who have grown up with it and even still use it. A vast reservoir of indigenous knowledge and skills still exists in the country especially in the rural communities and it is important to capture this valuable resource before it has passed on. One of the aims of the ATC at Fort Hare University is to create a data base of indigenous animal traction knowledge and skills.

11 International Overview

Animal Traction or Draught Animal Power as it is sometimes referred to has played a most important role in the development of mankind. As has been the case in South Africa it has been completely overtaken by fossil fueled engines and machines. It is still used on a large scale in many third world countries throughout the world but it is beginning to make a comeback in many first world countries as well.

In the United Kingdom, Europe, Canada and the United States of America, in particular amongst the Amish peoples, it is being used more and more. In many cases it is more of a hobby but to an increasing amount it is playing an important role notably in the forestry industry, for cartage over short distances ie: milk delivery and in certain communities such as the Amish people who use it as a major power source for their agriculture, and transport.

SANAT is an affiliated member of ATNESA and has benefited from this international network, which has enabled South Africa to network and link up with all the countries which are still using or have reverted to animal traction