Management of draught animals: a welfare and health perspective in South Africa

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Abstract

Significant progress has been made in the past four years in South Africa in the field of animal power and an awareness of the use, importance and necessity of using cattle (bovine) and donkeys, horses and mules (equine) for draught purposes has been achieved at all levels. However challenges still exist, and these are explored in order to determine specific and appropriate strategies to progress further.

This paper concentrates on current and local technology, especially with regard to the type of equipment used on these animals. Definitions of animal welfare and health, within the animal power context, are provided as a baseline from which to proceed. The requirements of the animals are emphasised to improve and maintain a high level of health, welfare and productivity, the focus being on the animal in work.

Studies, community projects, training programmes and information are reviewed to identify the progress that has already been achieved, and constraints and concerns are then discussed. Based on this information a basic profile of the needs of the work animals and their owners is suggested to ensure clarity and appropriateness when addressing the challenges facing animal traction, and to assist in forming strategies to meet these challenges.

Introduction

National and regional draught animal power workshops have been held in South Africa, mainly since 1993. These have focussed on identifying the status and level of use of animals for work (Joubert, 1998) and, in welfare and health, to identify research priorities for these animals (Krecek *et. al.*, 1994).

A policy document from the National Department of Agriculture (Hanekom, 1998) now not only recognises animal traction as being appropriate to fulfil the needs of the small scale farming sector, but suggests specific courses of action to address some of the problem areas. Two areas highlighted in this document are the development of harnesses and other equipment, which are affordable and humane, and extension courses.

In training, the first post-graduate course in draught animal power was held in 1998. The Universities of Pretoria and Edinburgh together with the University of Fort Hare presented this to 16 participants from nine different countries in Africa. The course took place at the University of Pretoria, Faculty of Veterinary Science and the University of Fort Hare, Animal Traction Centre, and was the first of its kind in South Africa. It extended over a four-week period, with the emphasis on practical and applied technology. The response to it has been very positive and another course is planned for the year 2000.

In research and development there has been considerable effort spent to establish strong links with communities where animal traction is being used, as well as surveys to assess the needs of the end-user (Letsoalo, *et. al.,* 1999; Krecek and Wells, 1999; O'Neill, 1999; Taylor *et. al.,* 1999; Krecek, 1999).

In extension, local farming publications and media programmes have provided limited but positive reports on the use of animal traction. These have assisted in creating a more positive attitude in general and dispelling beliefs that the use of draught power is something of the past.

This paper reviews the current status of welfare and health policy concerning draught animals in South Africa and identifies current programmes developed to improve the management and welfare of these animals, to the ultimate benefit of the livelihood of the animal user and his or her family.

Definition of welfare

In simple terms, welfare can be defined as 'well-being'. Arguably, the most widely recognised and accepted definition of welfare is that of the 'Five Freedoms' (Brambell, *et. al.,* 1965) which over time have been revised and are currently accepted as:

- Freedom from starvation or physical discomfort
- Freedom from pain, injury or discomfort
- Freedom from thermal or physical discomfort
- Freedom from fear or distress

- Freedom to express most normal, socially acceptable patterns of behaviour.

However, it is felt that for work animals a more specific and concise definition should be considered. The coexistence of livestock and man can be regarded as symbiotic, meaning that they both derive benefit from the association (Sambraus, 1992). The owner should care for and feed the animal well, protect it from predators, parasites, disease, injury, pain and extreme weather. In addition the animal should be worked within its physical capabilities and treated humanely. The animal in turn will work for the owner and fulfil the needs for transport and power. The welfare of the animal should encompass their psychological and physical well being.

Definition of health

An animal in good health is one that is sound in body; and free from physical disease and pain. Health, together with welfare, is fundamental to a productive working animal. Some of the questions that have commonly been posed by those concerned with the research, development and extension of draught animal power within communities (Krecek, *et. al.,* 1994; Krecek, 1997) are:

- Which interventions lead to a longer working life in working animals?
- What are the cost-effective interventions?
- To what extent are the nutrition - disease interactions important?

Requirements of the animals

During discussions at the first workshop of the Animal Traction Network for Eastern and Southern Africa (ATNESA) in Zambia, the recommendations were put forward that animals should have adequate quality and quantity of feed available, easy access to water and animals should be treated humanely (Pearson and Aganga, 1994).

Health

The health and welfare of work animals is fundamental to maximise their productivity and well being (Starkey *et. al.,* 1995; Pearson *et. al.,* 1997).

During the National animal traction rapid appraisal survey conducted in 1995, animal disease was seldom cited as a major constraint to the use of draught animals (Starkey *et. al.,* 1995). Subsequently a number of studies were undertaken to gain a more complete understanding of the status of health of working animals. The intent has been that armed with such information, appropriate recommendations could be made to owners (Wells, *et. al.,* 1998; Wells and Krecek, 1999; Letsoalo *et. al.,* 1999; McCrindle, 1998). All studies throughout South Africa have identified similar constraints: availability of stock remedies, availability of sufficient animal health advice and adequate extensional information.

Table 1: The most common and basic requirements of draught animals based on findings during community projects undertaken by the National Council of Societies for the Prevention of Cruelty to Animals (NSPCA) over the period of 10 years (1989-1999)

Health	Animals need to be kept free from disease, injury and harmful parasites. Preventative and remedial vaccines and treatment should be undertaken on time where applicable. Operations (e.g. castration) should be performed by people with the necessary skills to ensure the methods used are safe, effective and humane.
Harnessing	Correctly fitted and well maintained harnessing of a suitable size should be used. Harnessing should be designed to enable the animals to perform to their fullest capacity, and should not cause discomfort or injuries.
Nutrition	Feed and water of sufficient quality, quantity and frequency not only to maintain a good physical condition, but to supply the energy and other requirements to enable them to work to their maximum potential, reproduce and rear healthy young.
Handling	Animals need to be humanely trained, in order to understand what is required and learn the necessary skills and commands. They should be worked with compatible animals, of the same size and species. They need to be worked within their physical capabilities, and handled with consideration.
Care	Animals need to be well cared for and protected from predators, inclement weather and abuse. Foot care and shoeing should be undertaken when necessary by people with suitable skills

Animals used for work are subject to the same diseases and parasitic problems encountered in animals that are not used for work. The main difference is that during periods of work, in draught, these animals can be stressed and are more susceptible to disease especially if undernourished. Parasites and parasite-borne diseases (e.g. redwater and heartwater) appear to be of common concern to users of draught animals in South Africa. In many communities owners are aware of the importance and need for external parasite control and either dip their animals or use pour-on remedies. Application of tick grease is also used to a lesser degree. Reports based on fieldwork indicate that cattle are more commonly treated for external parasites than are equids. Where external parasite control is not undertaken, lack of finances is usually cited as the reason. Owners appear to have less knowledge of, and concern for, internal parasites, perhaps because they are less visible (Krecek and Wells, 1999).

Until recently few investigations into the effect of worm infection (internal parasites) in donkeys and their treatment have been undertaken, although according to Pearson and Smith (1994), helminth parasites are thought to be a major cause of unthriftiness and low life expectancy of working donkeys. Recent studies emphasise low cost strategies of disease control such as strategic deworming and removal of faeces (Matthee *et. al.,* 1999). The most common problems identified with working donkeys are wounds, harness sores and ticks (Krecek and Wells, 1999). The reason why very few people use veterinarians, is probably in most part due to the lack of finances and availability of veterinarians, particularly in the more remote areas.

Traditional, or home made remedies are often used to treat animals (Letsoalo *et. al* , 1999; Starkey *et. al.,* 1995; Mzileni, 1999; Krecek and Wells, 1999). It is claimed that these are successful (Miles, 1997), but the paucity of the information currently available makes critical assessment of the situation difficult.

Suitability of stock

Pruvost (1997) stated that a working animal should be appropriate to its working environment and to the work to be done. It should be calm and attentive, properly fed and broken in, and trained in an enlightened manner. Every effort must be made to ensure that the most appropriate animals are used, taking into consideration size, temperament, tractability, health age and suitability to the environmental conditions. There is concern for the use of ex-racehorses and pet ponies, which are purchased for work use, particularly in more urban areas. Many of these animals have been found to be unsuitable and they cannot adapt or thrive under communal grazing systems. In addition selective breeding and training for racing often results in these horses having unsuitable temperaments for draught work. Some of these animals are sold with existing and irreparable injuries and in addition their physical capabilities in terms of conformation and suitability to environmental conditions, may result in an animal incapable of producing the type of stamina and power required for regular, sustained work, such as pulling carts. Starkey *et. al.* (1995) reported that these type of horses are said to have shorter working lives than local, native stock.

Nutrition

In order to perform well, draught animals need to receive feed of a suitable quantity and quality. Panin and Ellis-Jones (1994) noted that communal grazing systems are common throughout sub-Saharan Africa. These communal grazing systems support not only working animals but other stock as well, and are often over-used. If supplementary feed is given to draught animals it is usually only when grazing is poor. However some horses, especially in urban areas, are given supplementary feeding as a matter of course. Anderson and Dennis (1994) suggested that animals, which are used throughout the year, require more feed than those used for only short periods of time seasonally.

A further two concerns are with the time that working animals are allowed to graze and the availability of water. Due to stock theft, predation and to facilitate catching animals for harnessing, the majority of bovines and a large percentage of equids are kept in camps or kraals at night. This confinement, together with work regimes, often limits the time animals can spend grazing, and may result in a poorer level of nutrition and the animals not being able to meet their energy requirements (Anderson and Dennis, 1994). Frequent and adequate watering is vitally important for animals confined to harness and provision must be made to fulfil this need.

If animals are not maintained in a reasonable condition during the dry seasons, they will be physically weak and their productivity will be affected (Luziga *et. al.,* 1994). Because these animals cannot perform to their full capacity at the onset of the rainy season, more animals may be required to perform the function that fewer animals in good condition could have undertaken (Chikura, 1994). The long-term effects of nutrition on growth of animal being reared to work also need to be reconsidered. In a survey conducted in Tanzania on work oxen by Mgaya *et. al.* (1994), it was noted that animals reared under harsh conditions start working later.

An additional concern with communal grazing, especially where this is close to roads where littering

is rife, is the incidence of animals eating plastic bags. Owners cite this as being a cause of death of their animals, particularly cattle.

Hoof care

Hoof care is of greatest concern with regards to equids, particularly horses, either with overgrown hooves (Krecek, *et. al.,* 1998) or poor shoeing. Horses are commonly used for commercial carting purposes, which entails being used frequently on tar roads and if not shod animals can become lame due to excessive hoof wear. Shoeing is necessary in these circumstances. However even where qualified farriers are available, the costs involved in shoeing are prohibitive for many owners. As a result owners resort to either shoeing their horses themselves or using a local person who has some knowledge in this subject. In many cases shoes are not changed frequently enough and are not removed until they are virtually worn out. The need for suitable farriers is greater under these circumstances, than in rural areas where animals work more often on the land or farm tracks.

Requirements of the owners

Animals used for work need to be productive, healthy, well trained and manageable. Surveys that have been undertaken have received direct input from the draught animal users. In a veterinary needs appraisal conducted in 1998, draught animal users defined their requirements for remedies, equipment, harnesses and animal health information (Krecek *et. al*., 1998). The most important priority identified was the lack of knowledge: training is needed to enable them to meet their own veterinary needs as far as possible (McCrindle*,* 1998). Farmers have also mentioned the problems they encountered in obtaining good, cheap harnesses, and complained that repair and replacement are problems (Starkey *et. al.*, 1995).

An animal is needed that not only has the power and training to fulfil a specific function but can cope with, and thrive in the environment in which it is kept. Physical power is not the only aspect to consider, according to Panin and Ellis-Jones (1994), but also other characteristics such as resistance to disease, low maintenance, quiet temperament and ease of handling and training.

Current and local harnessing methods

Cattle are normally harnessed using withers/shoulder yokes and equids using breastplates/bands. The harnesses are often locally made using local skills and resources. The costs of harnesses are often greater than the value of the animals, and harnesses or the materials from which they are made may not be accessible to the owner. Animals may become more difficult to handle and control if they are worked in harnessing that causes discomfort or injury. It is in the interest of the animals and farmer that harnessing systems are made which fit comfortably.

Bovines

Yokes are made from wood, although metal poles are occasionally used. Pegs or 'skeis' that fit on either side of the animal's neck are usually made from wood, but can be metal hoops or rods, even if the yoke beam is made from wood. Neck straps that fasten under the neck and onto the pegs are usually rope, leather or chain. The lead rope or 'reins' fastened around the base of the horns is usually nylon or leather.

Equids

Breastbands and bridles may be made of leather, canvas, nylon, rubber, conveyor belting or rope. Sheepskin, foam or cloth padding may be used as a cushion on the breastplates. Blinkers are usually made from leather. Conventional bits are generally used, but bits made from wire, chain or rope are sometimes used. Breeching straps, where employed are usually leather, canvas or conveyor belting.

The main shaft/disselboom is attached to the animals using a smaller shaft attached at right angles to it. The latter hang under the necks of the animals and are suspended by a band fitted over the neck. This neck band may be made of leather, canvas, nylon or rubber conveyor belting, and is seldom padded.

Welfare concerns - Bovine yokes

While neck yokes are an appropriate method of harnessing, the weight of the yoke and the manner in which it is attached to the cattle may be problematic. Oudman (1994), noted that neck yokes that are not shaped have a small contact area with the animal, creating a lot of pressure on the animal's skin which in turn leads to discomfort and even injury. Many types of wood have appropriate combinations of weight, strength, elasticity and price to make them suitable material for a yoke. Wooden yokes are relatively easy to pad and the yokes should be shaped into double bows to more closely match the shape of the neck/hump/withers, thus giving a greater surface area of contact and increasing both the comfort and effectiveness of a wooden yoke. The surface of the yoke and skeis should be well finished, as friction caused between the animal and the yoke during work periods could result in abrasions or injuries.

To prevent the skeis at either side of the neck from rotating and pressing against the neck or shoulder of

the animal, the beam or traction chain should be attached below the centre of the yoke (Starkey, 1989). The thong or rope under the neck must be securely attached but must in no way cause discomfort to the animal or impede its breathing, as this will have a detrimental affect on its performance.

Carts are seldom fitted with brakes and breeching straps are not used locally on cattle, so in order to stop a cart the animals are slowed and brought to a halt. This can place additional pressure on the animals' necks.

Welfare concerns - Equine breastbands

The method and type of harnessing used and the manner in which it is attached poses serious welfare concerns and the majority of injuries observed with equids are harness related. Starkey *et. al.*, (1995), found that existing harnesses for donkeys and horses are often poorly designed and are crudely repaired with wire, causing problems to the animals. The conformation of equids is not suited to neck yokes but to collars and breastbands. Starkey (1994) stated that it is generally agreed that the yoking of horses, mules or donkeys is not an efficient harnessing strategy, and breastbands or collars are the harnessing systems of choice. Pearson and Aganga (1994), further suggested that the use of neck yokes in donkeys be discouraged, to not only improve their welfare, but also their effectiveness.

The centre shaft and weight of the cart is suspended from the neck of the animals and where breeching straps are not used, also it acts as the braking system. Pruvost (1997) suggests that a more effective and humane system is to attach the shaft to a padded, modified saddle on the back of the animal. If correctly fitted and applied this not only minimises injuries to the animal, but also increases the work potential and comfort of the animal. Weight distributed on the back and over the ribs is much more suitable than on the neck of the animal. If carts are not equipped with brakes then breeching straps should be used. Owners should ensure that carts are not overloaded, and that wheels are properly inflated to provide for smoother and easier traction.

Even when the method of harnessing is suitable, other aspects such as the size of the harness, the manner in which it is repaired and how it is fitted onto the animal should be considered. In cases where animals are used on a rotational basis and different animals may use the same harnesses, the necessary adjustments must be made to accommodate the size of the individual animal. Injuries that occur as a result of harnessing are relatively easy to prevent by ensuring that all sections of the harnessing are well finished, with no abrasive edges. The use of padding, especially on the breastbands and necks strap should be encouraged as it gives added comfort and protects the skin (Starkey, 1989).

Where bits are used, they should be as mild as possible while still providing the owner with control over the animal. Bits should be correctly fitted and should have no sharp edges, conventional bits are recommended. Chains, ropes and wire are not suitable and can cause long term damage and hardening of the mouth, resulting in animals that are difficult to handle and slow to respond.

Another factor to be addressed is the use of animals, particularly in large teams which may be of a different size or species and where the speed at which the animals walk is different as this may cause unnecessary stress, especially to the smaller or weaker animals in the team (A.B.D. Joubert, pers comm, 1999).

Constraints

Constraints exist both within the draught animal sector and outside it. In the past the perception of many people towards draught animals was negative. In some areas veterinary agents have actively tried to discourage farmers from using animal traction, arguing that it reduces production. They have argued that using cattle for work reduces meat quality and quantity. Donkeys and mature oxen are 'non-productive (Starkey *e.t al.*, 1995)**.** With an increase in the use of motorised vehicles and the move away from animal power there has been little, if any, formal training or research on draught animal power undertaken in schools, agricultural colleges or universities in the past forty years in South Africa (Starkey *et. al.,* 1995; Joubert, 1997).

The two most common constraints identified in the field are lack of finances and lack of availability of resources such as material to make harnessing, suitable feed and veterinary assistance (Taylor, 1999). Both extension officers and farmers have indicated that primary veterinary health care is needed for donkeys, and that they require basic information about animal traction (e.g. appropriate implements and harnesses for donkeys, Wells and Krecek, 1998). Community members have requested, among other things, farmer's days and literature about disease and wound prevention. Information on basic donkey management and health, as well as on animal-drawn implements and harnessing was also requested. This information needs to be made available to extension officers and owners. Provision of basic veterinary services and education of owners about the correct treatment of their donkeys is also a priority (Wells and Krecek, 1998).

Table 2: The most common challenges to work animals in South Africa:

Controllable	Limited control	Uncontrollable
Nutrition	Stock theft	Drought
Harnessing	Road accidents	Land availability
Health	Health	Grazing quality/quantity
Management	Grazing quality/quantity	Finances
Training - owner/animal	Fighting/injuries	
Knowledge - owner	Finances	
Welfare	Predators -animal/human	
	Perceptions and publicity	

Stock theft and branding

Throughout the country, stock theft is becoming more common, and is cited by farmers as being a limiting factor in draught animal use, particularly use of cattle. When draught animals are stolen not only is their value lost, but also their potential work output, which is more serious during peak working times.

To attempt to control theft and improve the detection and recovery rate of stolen animals branding of cattle will be compulsory throughout South Africa as from the 1 October 1999. This will affect the movement, sale and slaughter of animals that are not branded, and penalties will be imposed on those not complying with the Livestock Brands Act, 1962. Tribal identification systems can still be undertaken, but do not supersede the need for a registered brand. Commercial farmers have expressed concerns over the placement of the brand as it devalues the hide of the animal if used for commercial purposes. If undertaken incorrectly branding can affect the productivity of an animal and, it is claimed, even cause its death. It will not be necessary at this stage to brand equids, and traditional marking methods are likely to continue. However, severe ear cropping, especially of donkeys, where the ear is cropped too close to the head should be discouraged in favour of less severe methods, such as ear notching.

Draught animals on roads

The lack of grazing land that is securely fenced contributes to the problem of stock grazing at roadsides and wandering onto roads. Although owners would prefer to confine their animals in suitable areas, finances are a limiting factor (Starkey *et. al.,* 1995). Animals involved in vehicle accidents are often not claimed, as owners would be liable for the cost to repair the vehicle, which could be much greater than the value of the donkey. Due to the potential dangers to motorised traffic, provincial and local traffic laws do not permit stock to wander unsupervised on roads and they may be impounded or shot. This has resulted in the decline in numbers of animals in some areas such as the Western Cape (Starkey *et. al.,* 1995) and also creates animosity between law enforcement officers and owners.

Some towns prohibit animal drawn carts from entering the main trading areas and traffic signs indicating this are posted on roads entering these towns. Such carts are limited to areas on the outskirts of town. The authorities do not allocate provision for a safe and suitable area in which to leave the carts, and it is up to the owner to find such an area.

Draught animals are slow compared to motorised vehicles, and where carts cannot be driven on the road verge inconsiderate motorists may force them off the road. Where there is not ample room to overtake they may crowd and hoot at the cart which sometimes results in the driver whipping the animals to make them move faster, even though the animals may be performing to their utmost capabilities. Even in areas where draught animals have been used for many years, there appears to be little, if any, consideration given to their needs for safe 'parking' areas and suitable sub-roads which could be used.

Predators

Little information is available on the number of injuries or casualties to draught animals as a result of predation. However during veterinary needs appraisals in Mpumalanga and Gauteng, South Africa, dogs killing or attacking stock were identified as a concern by the communities (McCrindle, 1996; McCrindle, 1998; McCrindle, 1999). Dog attacks in urban areas, where dogs are not familiar with livestock have been witnessed. Calves and donkeys

in particular appear to be more vulnerable, possibly because they are smaller, more docile and not as swift to retaliate to an attack, as horses and mules.

In Mpumalanga Province, farmers reported that the biggest threat to donkeys was from humans (not the owners) who sometimes abused them (Starkey *et. al.,* 1995). The NSPCA and some of its local branches throughout the country have been approached and assistance requested by draught animal owners following attacks on their animals by people. These attacks, often on donkeys, but sometimes horses, are often brutal and may take the form of stabbing, beating, hanging, slaughtering, burning with water or oil, and stoning. The reasons given by the perpetrators when they are identified are: animals eating crops or gardens**,** trespassing, jealousy and neighbour or community feuds.

In a case currently under investigation by the NSPCA, 1998, in the Northern Province, 45 donkeys owned by members of the local communities, were found killed on one property - the accused citing protection of property as the reason for the killings.

Fighting and injuries

Injuries are commonly caused by harnessing, abuse and animals fighting. With horses and donkeys, it is not uncommon to find animals suffering from injuries as a result of being bitten or kicked by other stallions or jacks. Bites as a result of males fighting are mentioned by Taylor (1999), during his study in the Ciskei. Fights between jacks do occur with the weaker being chased away. Many receive severe bite wounds (Krecek and Wells, 1999). When a female is on heat stallions and jacks can become more difficult and dangerous to handle and may stray, and become injured as a result of fighting. Jacks will normally search out females in oestrus and their performance may be lowered (Aganga and Maphorisa, 1994).

In communal farming situations it is very difficult to keep animals belonging to a number of owners separate from each other and to prevent them from straying. Castration of males, unless deliberately being kept for breeding purposes, is therefore an effective manner of combating these problems, if undertaken correctly and humanely by skilled persons.

Castration

Taylor (1999), in the Ciskei, found that owners of equids castrated animals to limit behavioural problems and to control breeding and numbers of animals. Castration was usually performed by the owner or a local person. In Hammanskraal, North West Province, interviews with donkey owners revealed that castration was performed by the owner in 45% of cases, or otherwise by a friend, relative or acquaintance (Wells and Krecek, 1998). It would appear that a large percentage of bulls or bull calves are castrated using the burdizzo method which is widely accepted as being effective and appropriate for use on cattle. In the case of horses and donkeys, the cast and cut method appears to be more common, and more widely accepted. Surgical castration requires more skill, and there is a greater risk with regards to bleeding and infection. Stress and pain involved is also greater, as anaesthetics are seldom, if ever, used.

The use of the burdizzo method to castrate equids is fairly uncommon and some veterinarians may not approve (Taylor, 1999). However, this method is being used successfully in Zimbabwe to castrate donkeys (J. Redmond, pers comm, 1999) with minimal costs, limited time required and limited side effects to the animals being involved. The risk of infection is eliminated or greatly reduced, and postoperative care is minimised. While initially there was resistance to this method of castration, especially from veterinarians, this has been overcome in areas where it is undertaken as the results have been positive and the long-term benefits obvious.

Community projects

The NSPCA and many of its local branches have community outreach projects which focus on improving the welfare of draught animals, primarily equids, due to the more obvious welfare concerns related to the type of harnessing used. Education is the primary approach and only in cases of deliberate abuse, is legal action taken against those responsible.

The potential and objectives of these projects vary and are dependent on public support and funding. Where funding is adequate, the services offered might include veterinary services, and/or farrier services and harnessing, all of which are made available at greatly subsidised rates to the owners. Where funding is limited, then educational leaflets, advice, primary health care and networking are the main functions.

Sponsored equine shows are popular and participants can enter their animals in various categories, such as that of "Animal in Best Condition". Prizes are selected to benefit the owner and their animals, and often consist of new harnessing and bits. They provide excellent incentives to the owners to care better for their animals; as a result a marked improvement in the condition of both animals and carts has been noted. These shows not only bring people together in a non-confrontational environment, but also engender a spirit of co-operation amongst both the organisers and participants. Many of the participants have deep rooted prejudices against law enforcement agencies, often with just cause, and at an event of this nature it

is possible to reach through these barriers.

Practical demonstrations using available resources are another popular training tool. Groups of owners are invited to assemble at a convenient area - where they collect supplies or pensions, and at a convenient time - when the owners and animals are waiting and work schedules are not interrupted. They are shown how to identify problems, how these problems can affect the animals, and appropriate methods of overcoming them. One of the most crucial components of these projects is promoting and demonstrating the humane use of available resources, such as conveyor belting to make breastplates for donkeys. Regardless of how receptive the owners are, finances are usually very limited, and progress can only be made if the message is appropriate. The response to these two methods has been overwhelmingly positive and long-term improvements have been observed in harnessing and its maintenance, and general care and handling of the animals.

Concerns

The potential and ability of the owner to identify and resolve problems encountered with their animals is obviously of vital importance as no actions will be taken until the problems are recognised. Abilities of owners can be divided into the following classes:

- ***Owners who are aware of specific problems associated with welfare/health.***
  They recognise the importance of treatment and preventative measures, have been or are prepared to spend money to ensure either preventative or remedial action, or both, are taken.
- ***Owners who are aware of specific problems associated with welfare/health.***
  They treat animals when necessary, using traditional or purchased remedies.
- ***Owners who have a limited knowledge of welfare/health problems.***
  Both preventative and remedial action is limited due to finances or lack of availability or access to remedies.
- ***Owners who are unaware of the implications of poor welfare/health and do not act due to lack of knowledge.***
- ***Owners who are aware of problems but fail to treat them possibly due to lack of interest or commitment to their stock.***

Identifying which category an individual owner falls into will determine the approach taken in assisting them. The most appropriate action must be taken based on the specific needs of both communities and the individuals within the communities.

In terms of the animals the single greatest concern with cattle is poor nutrition, especially after winter, resulting in poorer productivity. While poor nutrition is also problematic with equids, harnessing methods and harness related injuries are of greatest concern.

Proposed strategies for the future

Obviously, there are some aspects of draught animal usage that, despite the need for improvement, are outside the scope of an organisation - such as increased finances, land availability and stock theft. There are areas however, where joint effort can improve the conditions of the animals and benefit the owners.

Training and education

The first and foremost is education and training. If the animal owner does not understand the need or methods of controlling parasites, for example, then regardless of what projects are undertaken support will be lacking. Information packages covering all aspects of draught animal usage should be collated and appropriate forms of transferring this information to the owners should be identified.

How the message is disseminated is vitally important and should be in the following forms, and in the appropriate language for the different areas - educational pamphlets, videos, television and newspaper/magazines, posters, verbal presentations, training courses, and in schools.

While education in schools is important for future generations, people who are not at school and currently use draught animals need to be reached; the decision makers are mostly older people (Letsoalo *et. al.,* 1999). The staff of the Veterinary Services, National Department of Agriculture are the vital link here. As animal health officers or technicians often live in or close to the communities they serve, they can provide frequent and suitable assistance. The fact that they are generally known and respected by the communities is one less barrier to overcome.

Nutrition

As animal nutrition is so vital, methods of improving the availability and level of nutrition should be explored. The owners of draught animals must be made aware of the benefits to them and their animals of improved nutrition and the importance of supplementary feeding, especially during dry periods. Possible examples are the promotion of the use of roadside grass either by animals under supervision or by cutting and storing, allowing working animals longer feeding periods, and provision of affordable and suitable supplementary feed.

Harnessing

Suitable and comfortable methods of harnessing should be identified and methods that are not effective or which are inhumane should be actively discouraged. Projects should be explored whereby local craftsmen throughout the country could be identified and trained to produce cheap and effective harnessing to supply to the local communities.

Conclusions

The awareness amongst decision makers concerning the use and needs of work animals has increased considerably in the past 5 years in South Africa, through the national network and many more players in the field. Communities and end users have clearly indicated the need for information and training to address the gaps. Our challenge is to offer an acceptable training approach and materials to these end users for it to be adopted and implemented successfully, with the long-term objective of improving productivity and health of working animals in countries where they are used.

Acknowledgements

The authors thank Professor Roy Tustin and Ms Ann Cheater for helpful comments with the manuscript.

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