



DRAUGHT ANIMAL NEWS

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- Despite the increasing interest in DAN, funding is becoming a problem. The editors are actively seeking funding for future issues, donations are welcome. Cheques payable to 'Draught Animal News' to the address below or bank transfer to Bank of Scotland, sort code 80–08–23, Draught Animal News 00107003. Anyone wishing to advertise in DAN should contact the editors.
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- We are always pleased to hear of any meetings, forthcoming events, new books and useful websites that can be advertised in the newsletter. Letters from draught animal owners, users or those people wanting information on a particular topic or problem are always welcome.
- Please send in articles and news, letters and comments to the editor, Dr R.A. Pearson, Draught Animal News, Centre for Tropical Veterinary Medicine, Division of Veterinary Clinical Studies, University of Edinburgh, Easter Bush Veterinary Centre, Roslin, Midlothian, EH25 9RG, Scotland, UK (fax +44 (0)131 651 3903; email anne.pearson@ed.ac.uk).
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HARNESS FORUM

This section has been included in this issue of DRAUGHT ANIMAL NEWS because several people have sent in letters, notes and opinions on harnessing of horses donkeys and mules and it seemed a good idea to put these together in one section rather than throughout the newsletter. The editor thanks everyone for finding the time to contribute on a very important issue of the welfare, health and performance of working equids and she thanks the contributors for permission to publish the following in Draught Animal News.

Workshops for Veterinary Students

Equine harnessing methods in developing countries outlined

Terry Davis, Harness Aid

Harness-Aid was recently formed to create a better understanding in the use of harness and harness systems used by draught animals worldwide.

For centuries, in the developed world, equines played a major role in the progress of mankind. Today however, their role is a passive one and their usage confined mainly to leisure/pleasure activities. On the other hand, research has shown that the use of equines in many developing countries is by comparison, a relatively new concept and a growing one. And rightly so. Equines are an invaluable, sustainable, cost-effective, multipurpose 'tool' with the capability to perform many of the tasks that are currently done manually.

In the light of a pending energy crisis that will bring greater hardship to people in poorer regions of the world, the use of equines needs to be encouraged further as a viable aid to food production and to public and commercial transport activities.

Regretfully however, management/usage proficiency is lacking and the necessary affiliated skills and knowledge to sustain their usage, remains undeveloped (Plate 29).

Important concerns like health/nutrition, foot care, harness development, cart design, draught implements and an understanding in the dynamics of animal draught are inadequate. The result is that the capabilities of this 'tool' is not fully utilised.

Plate 29. Typical African donkey harness (T Davis)

Harness related injuries are common and have long been identified as a problem area and one of significance in which little progress has been made. Owners, through necessity and without the skills and expertise required for successful harness

manufacture, are left to their own devices in creating what they believe to be suitable harness using inappropriate materials. The consequences of this 'do-it-yourself' approach results in poorly manufactured equipment that is directly responsible for wounds to the neck, shoulders, abdomens and backs of animals. These are commonplace and many go untreated, sometimes with fatal consequences.

It's estimated that 60% of veterinary intervention in developing countries is in the treatment of harness related injuries. Veterinarians, being in the forefront of animal welfare, are called upon to provide remedial treatment for these injuries. This they do with a proficiency that's second-to-none for the benefit of the animal. However, the treatment applied is often rendered ineffective by the animal being returned to the root cause of their injury. ***The harness!***

In realising the need, vets increasingly find themselves in the difficult position of having to initiate improvements to existing harness without the necessary expertise required to implement them effectively. The problem is essentially a harness related one for which vets cannot be held accountable. To address it effectively requires practical, preventative intervention employing people with relevant expertise in harness manufacture and usage. Harness development/manufacture is a specialised subject, which unfortunately is not included in the core curriculum of veterinary training.

Most harness related injuries are preventable

To reduce the incidence of injury and to liberate vets, not to mention equines from this endless cycle of events, significant improvement to draught animal harness is required. On occasions, simply drawing attention to bad practices or making minor alterations to harness can achieve a reduction in injuries enabling equines to be more productive.

Equines are willing workers. To function at their best they require harness that allows for complete freedom of movement with minimum risk of injury. Its also required to be comfortable, efficient and cost effective. This achieved, it's possible to increase their output by an approx 20%-25%.

Harness-Aid seeks to address this and is resolute in introducing practical, sustainable solutions to the problems encountered. Using time-honoured skills and long-standing expertise in harness manufacture we are able to advise, instruct and educate to a level that will enable local people to find local solutions to the longstanding difficulties caused through the use of inappropriate harness, bringing benefit's to the community at large.

With this in mind we have extended this to include workshops/programmes specifically for vets and veterinary students who intend to work with equine in developing countries. This is designed to enhance the understanding of harnessing difficulties likely to be encountered. Topics such as the dynamics of animal draught and the principals of harness design, harness variations and its component parts, its suitability for the task in hand, correct fitting and adjustment to provide optimum draught, and the use of suitable materials are all presented.

Should this be of interest and you would like to discuss it further please contact me at : harnessaid@yahoo.co.uk or telephone 01694 781206. More information is available on our website: www.harnessaid.com. If you prefer to write send to: 5 Leamore Common, Wistanstow, Craven Arms, Shropshire, SY7 8DN, UK.

TAWS Guidelines for Equine Draught Harness for Developing Countries

Roger Connan

*World Association for Transport Animal Welfare and Studies (TAWS)
Hardwick Court Farm, Hardwick Lane, Chertsey, Surrey, United Kingdom*

- **Introduction:** Throughout the developing world, harness is made to local designs and with locally available materials but all too often these are inappropriate in one or both respects; for example, the use on equines of a yoke designed for oxen. We are all familiar with the fact that these things can lead to adverse effects on the efficiency and/or welfare of the animal.

Ill-fitting harness or harness in poor repair can also give rise to damage but more commonly the latter is a consequence of uninformed design. Furthermore, there is sometimes little understanding or thought given to the optimum method of attachment of the animal to the vehicle or agricultural implement.

Attempts to ameliorate the situation with 'improved' designs are often unsuccessful. This is especially so when expensive or locally unavailable materials are employed. Help and advice are needed and indeed are offered more widely now than ever before but the advice must be sound and guided by certain essential principles. Conflicting advice is very destructive!

Recognising this but also the legitimacy of local design, TAWS offers to advisors and instructors and/or harness makers themselves, the following list which it considers are the irreducible essentials of good harnessing which must always be adhered to.

- **Availability:** All harness items recommended for use in developing countries should be affordable by local owners. They should be made from materials available in-country so that they can be easily repaired or replaced.
- **Materials:** Natural products such as leather, cotton or hessian may be ideal. However, for practical as well as economic reasons selected man-made materials (synthetics) can also be used satisfactorily for parts of the harness provided precautions are taken. Since many synthetics become abrasive, padding must always be used at pressure points and there should be lining next to the skin elsewhere. Furthermore, because they can cause an unacceptable local temperature increase, rubber or plastic sheeting should never be used directly on the skin. This is especially contra-indicated in tropical regions.
- **Sustainability:** The design should be simple and effective, allowing freedom of natural movement and with minimum risk of injury. The harness should be comfortable for the working animal and in addition, easily cleanable. Appropriate methods of harnessing should be sustainable and harness makers trained, not just in the relevant construction techniques but also in the correct fitting of harness and the principles which apply.
- **Breast and neck collars:** A collar, either of a breast or neck type, is required for the draught animal to push against to draw the load forward. This is the primary piece of harness, although for pack or ridden animals the saddle would be of first

importance. The breast collar is most commonly used, especially on donkeys and is effective with two or four wheeled vehicles for light haulage on relatively flat surfaces or for cultivation. Sometimes a double neck strap is adopted to hold it in position. A breast collar should be used in conjunction with long traces and a swingletree to avoid shoulder injuries.

Neck collars, also with long traces and a swingletree, provide a frame against which the animal pushes with its neck and shoulders and can be more effective with heavy loads but they must be a good fit. Adequate, well placed padding is essential. Full neck collars are labour intensive to produce properly and if used inappropriately, can be harmful.

- **Breeching:** The breeching, complete with its breeching straps or other form of attachments, plays an essential role in providing braking for a cart, carriage or wagon with shafts. It also facilitates backing a vehicle, adds extra manoeuvrability and assists in keeping the saddle in position. A crupper, which is an auxiliary part of some breechings, may prove to be an added complication but in certain situations, with pack animals in particular, it is considered essential to stabilise the saddle when a breeching as such is not used. The tendency to attach the crupper too tightly must be resisted or tail wounds result and furthermore, if it is not kept clean and soft, dried dung and sweat can also cause injury.
- **Draught saddles:** A saddle is required to take the weight of the shafts on a shafted vehicle whether or not a load is being carried. There will usually be greater weight on the saddle if the cart is two wheeled but this can be kept to a minimum with good balance. The saddle can be a simple design but should be solidly constructed, well padded to avoid pressure on the spine and held in place by a girth. The latter is quite different from a belly band, the purpose of which is to stop the shafts from rising upwards if the cart starts to tip down at the back. The belly band is therefore an essential harness component for two wheeled carts. It should be made from a broad strap rather than a thin rope.
- **Swingletree:** The use of a swingletree should be encouraged because long traces not only improve work output but also reduce neck and shoulder injuries. However, they must be of an appropriate width. A balancer may be necessary when two animals with swingletrees are working abreast.
- **Efficiency and welfare:** The full potential of a draught animal with a good set of harness will only be realised when there is proper attachment to the vehicle or cultivator; this is of most importance for the operation of two wheeled carts, when the balance of the cart and load are paramount. When an animal can work efficiently it can normally do so without being physiologically stressed. It therefore retains an acceptable level of health and well-being.

Acknowledgements

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3. Stitch the ropes through with fishing twine or similar so that they are kept flat; also so they are tight to the D irons
4. Cover with cloth from strong (but cheap) old trousers – or blanket or hemp sacking. Sew it into a tube by machine first if possible.
5. For the Breastband component, using the 36” band, sew on a neckband of about 23” (60cm) which may be made out of the waistband of the trousers. Attachment point is about 8” (20cm) from each D iron. If seat-belt material is used it should be padded to prevent it cutting. Stitching should prevent the padding sleeves from slipping out of centre.
6. The same with the Breaching, using the 44” band, except that this should have 2 backstraps to keep it in place. These may be a bit longer, depending on size of donkey. The rear one should be wide and strong to carry the downward component of force for ploughing. (ref Frank Inns) as it carries loops for the traces.
7. Now the breastband and breaching should be fitted on the donkey to check for size. Accommodation for different sizes is mostly done by adjusting the length of the link between the two.
For convenience of dismantling, this harness is equipped with trace hooks forged from 8mm round bar, but simple knots will work.

The traces are made from strong rope – nylon etc. as the yellow one in the picture above, and bound or knotted. This donkey's traces are 31" (80cm) long, but should be adjustable as they may stretch. I prefer them short so as not to get tangled in legs when slack.

8. The evener is made similar to an ox-yoke, and about 16" (40cm) between the ropes.
 9. The breaching D irons should be linked to hooks toward the front of the cart shafts, and these links adjusted after harnessing so that the whole harness is reasonably tight.
 10. For cart work, a saddle is required. We made these from a short length of motorbike tyre, set U-shaped to take the rope carrying the shafts. Flaps cut down from this are attached to a girth.

Underneath, on either side, is fastened a short stick with cloth wrapped round it. These support the saddle on the ribs, either side of the backbone.

To make this, first cut out a piece of this shape from a small car tyre, then punch holes in it

- (a) for sewing on the wrapped sticks – my inner holes are 3 cm apart
- (b) for attaching the girths – these are best formed as slots.

Take two sticks, eg. pieces of broomstick about 25 cm long, and wrap them in cloth such as from old trousers, several layers thick. Stitch the cloth so it holds together.

Sew the wrapped sticks to the rubber tyre piece so that the sticks lie just on either side of the backbone, to support the cart's weight on the ribs.

Attach girth straps to the slots. Ideally these should have buckles, but double rings can work, or strong clips taken from a discarded back-pack bag.

A rope looped round each cart shaft now rests in the valley formed by the tyre section.

This rope carries the load on the cart shafts. Its loops should be free to move forwards or backwards along the shafts, according to the relative location of saddle and other harness, so that this rope is neither pulling forward nor backward, but just bearing weight.

The cart should be loaded so as to be nearly balanced, but with enough front loading that the shafts never lift up by themselves. If needed, a strap may be fixed under the belly between the shafts to prevent this occurring, for example during loading or unloading the cart (a discarded bicycle tube might do this well).

For further information contact Alan Chadborn at 54, Somerford Way, London SE16 6QW (Tel: 020 7231 8378, achadborn@suffolkonline.net).

Acknowledgements

The donkey in these pictures is Tammy of the Surrey Docks Farm in Rotherhithe, London. She is about 30 years old!

Harness Development

Summary of report addressing issues relating to the harnessing of equines in developing countries

Terry Davis

Harness development has long been recognised as a problem area and one of significance in developing countries. It is widely accepted that many of the debilitating injuries seen in equids are as a direct result of inappropriate harnessing methods.

The use of inappropriate harness is only one of the many difficulties faced by equine owners but is one that is regarded as essentially avoidable. In reducing the incidence of harness related injuries, improved all-round equine efficiency can be realized, particularly in areas such as transport (public and commercial) and in agriculture, *ie* cultivation and transportation of goods to market.

The veterinary profession plays a major role in animal welfare. Many animal welfare organisations rely upon them to assess and to provide amongst other things, remedial treatment for harness related injuries. This they do with a proficiency that's second-to-none for the benefit of the animal. However, the treatment applied is all too often rendered ineffective by the animal being returned to the offending harness, the root cause of injury.

In being aware of this, vets increasingly find themselves in the difficult position of having to advise or to initiate improvements to existing harness without the necessary expertise required to implement them effectively. Harness development/manufacture is a specialised subject that is not included in the core curriculum of veterinary training. This is the responsibility of specialist harness makers and it is only by attending to the faults in harness design that an effective 'cure' can be achieved.

Training initiatives over the past decade have been woefully inadequate offering little by way of inspiration, innovation or direction and falling far short of resolution. The absence of specialist technical/practical training initiatives and personnel has given rise to the use of ill-informed, inexperienced guide's, that has resulted in the introduction of misleading information that is not in keeping with the fundamental, long established criteria of harness design/construction and usage. This has done little to advance the understanding of harness development.

If any improvements are to be made it is imperative that unanimity amongst interventionists (taking into account all aspects to draught animal/harness usage, including design/construction methods, working practices and overall objectives) be considered. There is a need for an approved, supportive infrastructure to ensure that information and training methods employed are correct and in keeping with established equine harnessing criteria. The requirement is for a basic, comprehensive set of guiding principles, representing an identifiable code of practice, with clearly defined objectives in accordance with equine needs, that can be understood and adhered to by all concerned.

A full copy of this report is available from Harness-Aid at harnessaid@yahoo.co.uk, or call +44 (0) 1694 781206. If you prefer to write please address your request to: Harness-Aid, 5 Leamore Common, Wistanstow, Craven Arms, Shropshire. SY7 8DN. More information is available on our website: www.harnessaid.com

Thoughts on Harnessing Donkeys for Work, Based on Practical Experiences in Southern Africa

correspondence from

Peta Jones, Donkey Power, CC, South Africa

Do we need to reinvent the wheel? Maybe I don't mean that exactly. Or maybe just as it is applicable to equine harness (and hitching), in the sense of DONKEY. Horses have been well catered to over the centuries. What I have come to realize is that we have two new situations to deal with when considering donkey harness:

Donkeys being hitched for pulling. Except for Mesopotamian onagers used in warfare, until quite recently donkeys were almost exclusively pack animals. (See below for that technology). Now that they are used for ploughing, people are tending to adopt cattle technology, *ie* yokes. When they adopt horse technology, *ie* pulling from the scapular-humerus joint rather than the scapular-spine, then there are some problems. A horse collar does well enough on a donkey, and the main problem is 2 below. But if used for wheeled vehicles, there is a *huge* problem, especially when there are only two wheels on the vehicle and a single shaft, and the weight is inevitably pitched forward through the shaft, which is also subject to the lever principle. A horse is of a shape that it is possible to hang the weight of the shaft from its withers. This does not happen with a donkey, as I know from frequent observation and tried to explain by means of the skeleton diagram. Poor donkeys get their necks weighed down grievously. This even happens with wagons (four wheels), as I had occasion to point on just recently, when I was giving a harness-making workshop and a wagon arrived exhibiting this very problem. The photo here is from Botswana, but is illustrative of the general problem:

Plate 30. Single shaft-two donkey, four-wheeled wagon in Botswana (P. Jones)

Low-resourced technologies. Because I myself lived in a very remote area of Zimbabwe where there was no metalworking, no carpentry (although woodcarving with little adzes a highly developed skill), I have been up against this myself in a very direct way. Nobody actually made ploughs or carts, they were simply brought in from the cities. The carts had not been modified since they were used with oxen, ditto the ploughs. So the carts in particular had no hitching points at all, except for the ring at the front end of the shaft. Users had to find their own solutions, which were usually bad ones, from half-remembered horse technology. Horses have always been scarce

in this area, owned only by the rich who can afford to vaccinate them against African horse sickness. So there was no opportunity for us to observe how it worked on horses, and to see where donkeys were different.

Solving the problem of a single pole cart

The problem is to ensure that the weight and any other force such as pulling is distributed equally between the donkeys, and is taken where the donkey can handle it. So some invention has been necessary - not necessarily **REinvention!**

Although I have argued that horse hitching should not be used for donkeys, I have to admit that this one did come from horses, via Martin Aeschlimann in Norway. When I first met him in Nairobi in 1995, he persuaded me to try it, and over the next couple of years I duly got it working for my own donkeys and cart, and have been nothing but pleased with the result. Colin Oram has argued, from the engineer's point of view, that it compresses the animals fore and aft. Yes, it does do that, but it doesn't seem to bother them. And as I watch the shaft bouncing up and down with the roughness of the track, I am well pleased that all those changes in pressure are being transferred to the hindquarters of my animals instead of to their necks.

Neither neck strap nor collar are used in this system, only the double-breastband. All the same, I have had to adapt it for point 2 above, so that users would not be alarmed by what they saw as the expense of extra harnesses. The harnesses they did have were usually supplied in the same way as, and often together with, the carts, namely from city markets. Thus they were made out of very rigid machine belting, lucky if it is more than 20 mm wide, bolted together and inevitably non-adjustable, but affordable. Even then, charities seem to feel they should give them out to 'poor donkey owners'. So what I aim for is something that donkey owners can make themselves, and repair

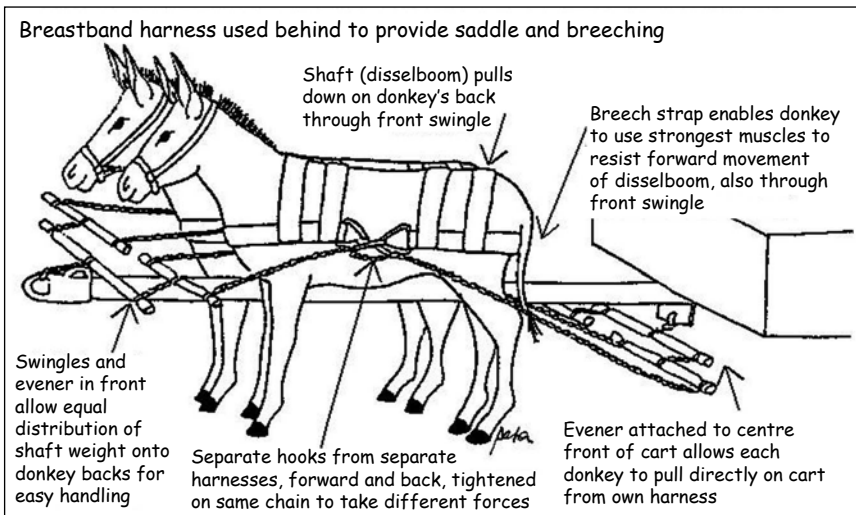


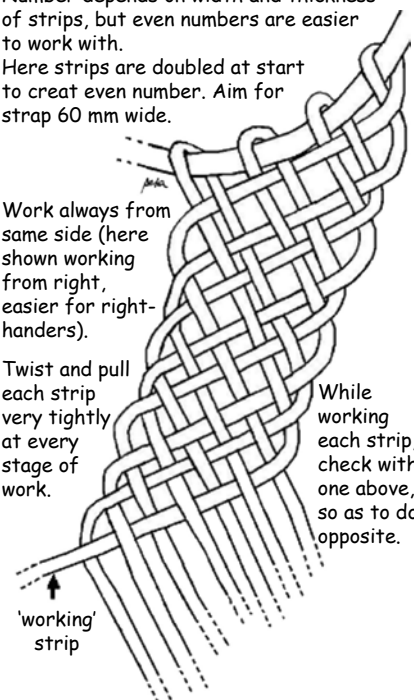
Figure 1. Design of harnessing for donkeys to pull single shaft cart (P.Jones)

without needing wire, and still feel that they are getting a bargain. I took me a while to arrive at supermarket bags, and I wish I had thought of it long ago. but it is certainly disastrous for donkeys, as they are not shaped quite as horses are. Yet, that neckstrap still features in the manuals of organisations as influential as the SPCA and the Agricultural Research Council in South Africa.

Plate 31. Single shaft cart in action using harness described in Plate 31 (P.Jones)

Braiding for harness strap

Number depends on width and thickness of strips, but even numbers are easier to work with.
Here strips are doubled at start to create even number. Aim for strap 60 mm wide.



Work always from same side (here shown working from right, easier for right-handers).

Twist and pull each strip very tightly at every stage of work.


While working each strip, check with one above, so as to do opposite.

'working' strip


Figure 2. How to braid plastic to make donkey harnesses

Joining strips


Step 1: View from above, two strips sit near ends to be joined.



Step 2: View from above and side. The strips are being interlaced.



Step 3: View from above and side. The strips are being pulled together to form a knot.



Then pull each end to make tight.

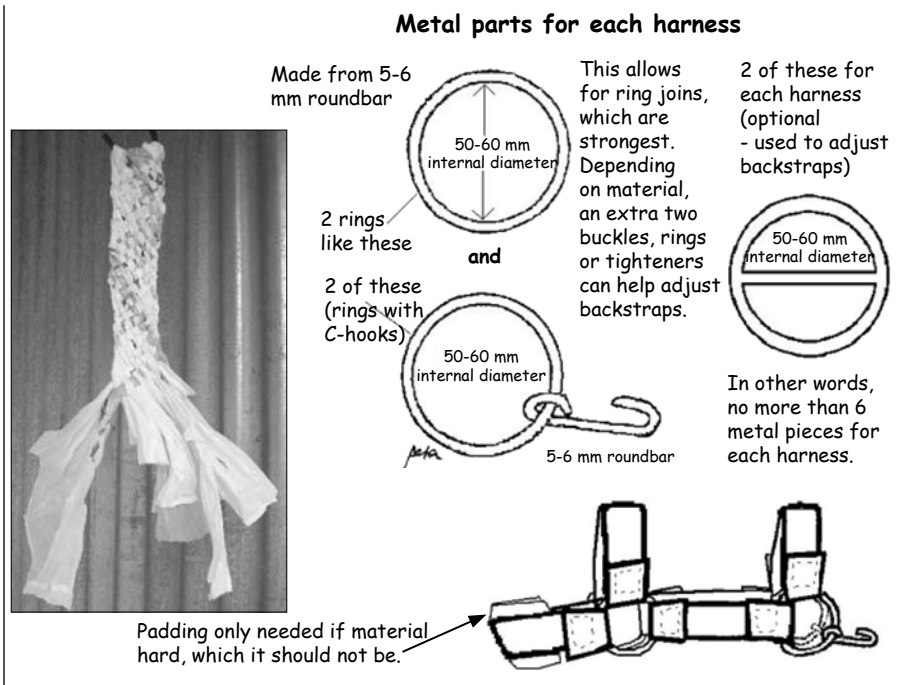


Figure 1 and Plate 31 show the hitching system I use, and have been using without problems for more than ten years. My donkeys are wearing harnesses braided from strips of plastic bag, as demonstrated in Figure 2, where I braided two more from softer plastic bags - a nicer result, but much more work! The ones I use have already shown their durability by being little changed after being used for ploughing through a whole season, where I sent them after my return from Addis. I had a hard time getting them back, as the bloke using them didn't want to part with them. And when they did come back, they showed no signs of wear. Yet I was assured they had been used for the whole three months, and that a lot of ploughing had been done!

Hitching for a two shaft-cart

The hitching for two-shaft carts is, in my view, much easier to organize, but I cannot say that I regularly use such a cart and so have not become familiar with the possible problems. I do know that, in countries where they are used, like Kenya and Ethiopia, harnessing seems to include a fairly hefty saddle over the back. If the purpose of the saddle is to take the cart's weight and then keep it off the donkey's spine and transfer it to the ribs, then well and good, but it does not need to be very hefty. Otherwise, a wide and comfortable strap, I should think, would be good enough. Often, however, I suspect that the pulling force itself is being exerted through the saddle, as in Colin Oram's designs and as in the rather confusing diagrams supplied in Kendat's little 'Happy donkey' booklet.

Field work – ploughing

Ploughs tend to get drawn by teams of donkeys rather than single donkeys, but that is less of a problem for harness, except for this problem: what I tend to see is the forward pairs pulling on an evener that is attached in its middle to the draw-chain from the plough, but suspended from the necks of the donkeys behind them! Hitching again

Plate 32. Donkey ploughing in South Africa (P Jones)

...There must be a better way of doing it, so one can be sure it is the plough that is being pulled and not the donkeys behind. My donkeys, luckily, very seldom do any ploughing, and when they do it is done by one or two of them, no more. However, they did spend one season doing it the other way (Plate 32), but came back with no signs of damage! In fact, it improved their health quite dramatically .

Backloading

For backloading donkeys, even though the old technologies were perfectly good for donkeys, some of them have been changed for the worse, on account of 2 above. Donkeys, with their side-to-side-pitched, back-to-front-level backs, do not need girths but they do most definitely need breast strap and breeching to prevent the load sliding back and forth. The breeching is too often a crupper, which can then pull most painfully under the base of the tail when the donkey moves downslope. Even when lower down on the haunches of the animal, the strap is often too thin, and on female donkeys can really cut across the vulva. From the American Donkey and Mule Society I have some charming Frederick Remington drawings from a century ago, where the strap is in that position, but of course it is wider. So the backframe I have developed, I find, is almost exactly like one some friends of mine dug out of their garden in Spain. It is easy to make and light, and can also be used under the saddle strap of a two-shaft cart. But when I was living on the Zambezi, I did have to do some inventing of my own. (Plate 33).

Harnessing and hitching

There is a lot of anxious discussion of 'harnessing' (which often means hitching) by animal welfare people in this part of the world [Southern Africa], because they see that most of the problems suffered by donkeys boil down to harness wounds. Certainly the appropriateness of the material

Plate 33. Back frame designed by Peta Jones for use on donkeys (P. Jones)

can be important, but I have observed that most of the wounding comes about through chafing, *ie* the movement of the harness against the donkey's hide.

This takes the problem back to hitching. Why is the harness so loose that it is rubbing? Usually because it is actually not doing the pulling work that it should, *ie* pulling through traces something which is directly behind the donkey. Those traces are often slack – because the animal is pushing on the neck pole – or the harness is attached sideways in some manner, often to the harness of the donkey abreast. The torque of the cart, if not managed through swingles and evener, can also exert a lateral force where not expected, although this is less of a problem in two-shaft carts.

The 'double breastband' system I use seems to maintain harness tightness without problem. I check that I can comfortably slip my fingers between harness and donkey flesh, although the tightness does vary with the movement of the cart. It is also a way of checking where the forces are being taken by the donkey. That's why, where material is concerned, I have realized that it is important to have something that is to a little extent elastic so that it can move with the muscles and the skin, not against them. Like leather, of course, but those straps braided from plastic bags do the job almost as well.

Another of the correspondents to DAN wonders at the lack of input of modern technology. We have a hard enough job just accessing traditional technologies (such as the evener, discussed above)! And it should be remembered that the use of donkeys in ploughing, for instance, is actually surprisingly new. Do the Amish use donkeys? (I have a feeling not). The Mesopotamians did use onagers for pulling chariots; we should maybe dig up some old carvings to see exactly how they did that. Watching shooting of a film about Mesopotamian war chariots more than 30 years ago, was one of my first encounters with donkeys - standing in for onagers. The owner first sensitized me to the remarkable abilities of donkeys. Tight turning circle was what I remember from that episode...

Harness materials

I certainly see all the advantages of the collar harness and using leather, but my experience has shown me some of the disadvantages. I myself have had difficulty satisfactorily adjusting the collars on donkeys, and when I see what difficulties rural folk get into with a simple breastband, I realize that collars are out of the question. Then materials ... they simply don't get looked after, and if they can be mended with wire, they will be. Wire is truly one thing that is plentiful around here! Bits get made of wire, too, and I'm trying hard to persuade people that bridles themselves are not really necessary for donkeys, although I didn't believe it myself when I was first told so more than 20 years ago!

Apart from this wire problem, in large part the solution comes back to hitching again. If the harness is in some places loose so that it will move against the animal's skin, galling results, no matter what the material. This even happens with padding. Adjustability helps, but it also depends on the material. If a strap won't go easily through a ring or buckle, a user will give up on adjustment. Apart from overcoming this, what makes leather so ideal are really three things: (a) stitchability, (b) slight elasticity, and (c) moisture absorption. So one is looking for material with those qualities, leather itself

being too expensive. There may be a history of several thousand years, but economics changed in that time, and animal hides and the labour for processing them are out of reach of most of Africa's donkey users!

Just further on from those interesting letters in DAN 45, I see Ed Emery's Hydra conference being advertised with a picture of a donkey in a bridle *without bit or blinkers*. Hooray. I have very similar pictures from West Africa, too.

■ Peta A. Jones, Donkey Power CC, Facilitation and Consultancy Services, PO Box 414, Tshitandani/Makhado, 0920, South Africa (email: astute@lantic.net).

SHORT NOTES AND NEWS

■ Some websites of interest including a new link for ATNESA

ATNESA (Animal traction network for eastern and Southern Africa) has a link website with the new logo, which is hosted within KENDAT's website – www.kendat.org/atnesa. You can also access it by going to www.kendat.org, and linking to it from there.



Other websites of interest are:

www.wheelandwater.co.za

www.workingvillages.org

www.farmingpages.com

www.pferdestark.de

www.prairieoxdrovers.com

www.harnessaid.com

www.britishhorseloggers.org

www.masseriaccoppola.it/dap

www.prommata.org

<http://agmachine.ning.com/forum>

www.tillersinternational.org

■ Rural Heritage update

Gail Damerow writes: "A blockbuster new book and a set of dynamite DVDs have been added to the online bookstore. Lynn Miller has written the Horse-drawn Mower Book, loaded with information on McCormick no. 7 and 9 mowers and the John Deere big four. The DVDs are by Doc Hammill on Teaching Horses to Drive and Fundamentals of Working Horses in Harness.

The long awaited second edition of *How to Be Your Own Veterinarian (Sometimes)* has finally arrived. The book has been completely updated, with 136 pages more than the first edition. Horse owners tell me time and time again that this book saves countless dollars in veterinary fees."

Rural Heritage, 281 Dean Ridge Lane, Gainesboro, TN 38562-5039 (Tel: 931-268-0655; editor@ruralheritage.com; <http://ruralheritage.com/>).

■ Animal power

News from *The Hindu*, 23 June, p 4 by their special correspondent:

"Move to breed 5 million donkeys in the 11th Plan for Indian Agriculture. A proposal

to this effect has been submitted to the Planning Commission, says a well-known livestock management expert N.S.Ramaswamy. The proposal might sound silly, but it is true. It is being mooted as part of upgrading the Draught Animal Power (DAP), used for ploughing and carting, world over.

N.S. Ramaswamy, noted livestock management expert, who was reportedly associated with the preparation of the Five Year Plans, right from the Third Plan period, has said that a proposal to this effect has indeed been submitted to the Planning Commission.

Participating in the three-day national symposium on 'Policy initiatives and technological interventions in the livestock production systems', which concluded in SV Veterinary University on Friday, Prof. Ramaswamy said that it was proposed that five million donkeys be raised during the 11th Plan period.

Pitching for a higher plan allocation for livestock development over agriculture, Prof. Ramaswamy said that a subsidy of Rs.2,000 per donkey would mean Rs.200 crore for 1 million donkeys. Explaining the economics of his proposal, he said that another Rs.500 crore would be needed to provide a subsidy of Rs.5,000 each to a donkey cart. This is estimated to fetch the owner Rs.100 per day for 200 days which would mean Rs.20,000 per year and in other words a revenue of Rs.2000 crore per annum for a subsidy of Rs.700 crore (Rs.500+200 crore). He said his 'donkey cart' proposal was well received in China and claimed that it was catching up."

■ Donkey power in Italy

A small town in Sicily, Castelbuono, has replaced rubbish collection trucks with donkeys and claims to be saving money as well as saving on fuel. Six donkeys have replaced the four rubbish collection trucks in the town of 10,000 people. By replacing these trucks with donkeys "We are saving money and making the world a better place, with less pollution", Castelbuono's mayor Mario Cicero said in a statement on the town's website. A donkey costs around 1,200 euros to buy, plus about 2,000 euros a year for food and maintenance, compared to 30,000 euros for a truck that needs 7,000 to 8,000 euros in maintenance per year. The donkeys work six days a week from 7am to 6pm in the old parts of the town. Each carries two wooden boxes, as panniers and the donkeys are accompanied by rubbish collectors, men who have now been renamed "ecological operators". Several other towns in the Calabria and Tusany regions of Italy are believed to have followed Castelbuono's lead.

■ A Centre in Benin supporting agricultural development

CENTRE DE GESTION DURABLE DES RESSOURCES ANIMALES ET VEGETALES



Nouorou-Dine Idrissou the chief executive has sent in the following information: "Je viens par ce mail vous présenter le Centre de Gestion Durable des Ressources Animales et Végétales (CGDRAV_ONG). C'est une ong constituée de jeunes diplômés sortis de grandes écoles d'Agronomie, de

Sceinces Animales et Environnementales. Il se sont retrouvées pour appuyer les populations à la base. Ils disposent également de ferme d'application, de recherches."

Profil du Centre

Le Centre de Gestion Durable des Ressources Animales et Végétales (CGDRAV_Ong) créé en 2002, a été officiellement enregistré en décembre 2004.

Il a pour objectifs:

- de former et de suivre le développement des activités agricoles ;
- de contribuer par ses compétences à la lutte contre la faim et la pauvreté au Bénin;
- de proposer sa participation aux actions de recherche, de formation et de diffusion de l'information dans le domaine de l'agriculture, de l'élevage et de la santé animale et toutes les techniques y afférentes;
- d'intégrer la gestion de l'environnement dans les activités d'agriculture et d'élevage;
- de participer à la promotion des activités de développement local;
- de favoriser l'émergence de dynamiques sociales en aidant ses partenaires à trouver des solutions techniques adaptées répondant à leurs besoins;
- d'organiser des congrès, colloques, séminaires et autres manifestations sur les sujets relatifs à la santé, les productions animales, le développement rural et la gestion des ressources naturelles.

Contact: CGDRAV, BP : 1096 Parakou – République du Bénin (email: cgdrav@yahoo.fr; Tél: (00229) 90 03 64 66)

■ **CIHEAM courses**



The International Centre for Advanced Mediterranean Agronomic Studies are running a range of different courses in 2008-09 including: evaluation of ruminant production systems, control of animal diseases, animal production and environmental management, risk management in Mediterranean agriculture, plant breeding, integrated planning for rural development and environmental management. For further details of these courses and others please check the website:

www.iamz.ciheam.org or Email: iamza@iamz.ciheam.org. Write to The Instituto Agronómico Mediterráneo de Zaragoza, Apartado 202, 50080, Zaragoza, Spain, tel: +34 976 716000; Fax +34 976 716001.

■ **The International Buffalo Information Centre**, Main Library, Kasetsart



University, P.O. Box 1084, Bangkok 10903, Thailand would like to inform everyone that their Buffalo Bulletin is now available free on line at their home page <http://ibic.lib.ku.ac.th> or Buffalo Bulletin homepage at <http://ibic.lib.ku.ac.th/e-bulletin/index.htm>.

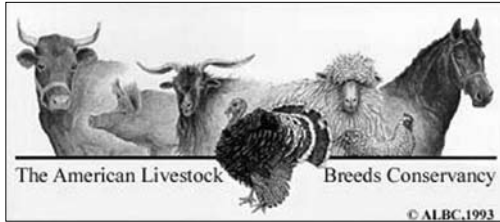
For email alert please fill in the form available on the website and you will receive email alerts for every new issue of Buffalo Bulletin.

NEW BOOKS



The book of the proceeding of the conference is available free to anyone working with or interested in working equines from Joe Anzuino, Veterinary Overseas Department, The Donkey Sanctuary, Sidmouth Devon, EX10 0NU, tel: +44 1395 578222. Fax: +44 1395 579266, email: joe.anzuino@thedonkeysanctuary.com





Managing Breeds for a Secure Future

(soft cover, 220 pages, illustrated, \$22.95)

The American Livestock Breeds Conservancy (ALBC) is delighted to announce the publication of its new book, *Managing Breeds for a Secure Future*, in time for the holiday season.

Written by livestock conservation leaders, D. Phillip Sponenberg and Donald

E. Bixby, *Managing Breeds for a Secure Future* addresses the many challenges of maintaining genetic diversity within species and breeds of domesticated livestock and poultry. It is both a theoretical exposition and a user's guide. It examines conservation issues and practical approaches for developing successful strategies for securing both standardized breeds and landraces. The book is rich with examples that demonstrate the practical application of the theory and that enable breed stewards to apply the principles to their own herds and flocks.

Managing breeds provides information useful to both the novice and the experienced breeder. Key points are pulled out of the text and examples are generously used to help new breeders identify and understand fundamental concepts. Crisp, clear, detailed explanations of techniques and strategies provide the fine points needed by a master breeder. The book also addresses the critically complex political and human issues that occur when saving rare breeds. Every breed association or club has the opportunity to play a pivotal role in the long-term success of its breed. This book alerts association leaders to potential obstacles and pitfalls, and informs all members of their responsibilities.

Breed association leaders and members, breed stewards, conservation organizations, teachers, researchers, and students will find this book excellent as a resource, a text, and a handbook. Breed stewards of all levels of experience will find themselves returning to this book again and again.

The book may be ordered directly from the ALBC office: ALBC, PO Box 477, Pittsboro, NC 27312, phone (919) 542-5704, or email albc@albc-usa.org; or from our web page: www.albc-usa.org.

Farm Power and Mechanization for Small Farms in Sub-Saharan Africa

by Brian G Sims and Josef Kienzle

FAO Agricultural and Food Engineering Technical Report (2006, 88 pp, \$26)

Many previous publications on farm mechanization, draught animal power, hand tool technology, etc. have tended to be narrowly focused. They dealt with tractors, or with draught animal, or with intermediate technology. The topic of farm power and mechanization also tended to be separated from the actual process of growing crops. As a result, there was a widespread lack of understanding of the topic and there were many widely held misconceptions regarding the essential contribution of farm power and mechanization to small farmers' livelihoods and living conditions. This manual breaks away from this rather narrow approach by putting the different sources of farm power, mechanization, machines, equipment and tools in a much broader context. Farm power requirements need to be viewed with reference to rural livelihoods and to farming systems as well as to the critical area of labour saving in HIV/AIDS-hit populations. No one particular type of technology is advocated. The publication considers the broad picture and the options that may be most appropriate. This manual provides an overview of options for farm power and technologies that could be suitable for smallholder farmers who are trying to make decisions with regard to the different types of farm power sources available. It also lays out the importance of the farming systems and the economic context within which mechanization takes place. Special emphasis is given to economics and finance as well as to the environmental impact of inappropriate mechanization.

Also available: Technical Report 1: Production and processing of small seeds for birds (2005) and 2: Contribution of farm power to smallholder livelihoods in sub-Saharan Africa (2005). All are in English.

Copies of FAO publications can be ordered from the online catalogue at www.fao.org/publishing/ or from Sales and Marketing Group, FAO Information Division, Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, 00100 Rome, Italy (email: publications-sales@fao.org; fax: (+39) 06 57053360; www.fao.org/icatalog/inter-e.htm)

LETTERS TO THE EDITOR

■ **Request for information on harnessing donkeys from Malawi:** Mathilde Nanninga writes:

“Greetings! As a local NGO in Northern Malawi we would like to promote donkeys for tillage and traction. Now it is very difficult to get a good harness design. We have tried it with canvas, but that is too soft and breaks too fast. At the moment we try to make a hame from wood, according to a description from the Development Technology Unit, Department of Engineering, University of Warwick, Coventry, CV4 7AL UK.

Do you have or know other harness designs? And what about saddle packs. We would like to have something which can be made locally with the aims to be ‘donkey friendly’ and ‘woman friendly’. Thanks for your help. Sincerely”

Mrs. Nanninga, IGA Manager, Matunkha Centre,
Private Bag 62, Rumphi, Malawi (Email:money@matunkha.com)

■ **Request for information on implements:** Norma Petroff, USA, writes
“My son Alexander’s project in Congo is moving forward, and he’s hoping to introduce ox power (www.workingvillages.org). What we’re looking for now is grants to research and build appropriate technology such as:

- ox powered oil seed crusher
- setting up a village-scale cart-making manufacture
- setting up a biogas digester, fueled by cow manure and farm wastes
- setting up a piping system for the digester to send gas to a dozen nearby houses
- bringing in experts who can demonstrate improved cob and thatch techniques

Any help will be most appreciated!”

Norma Petroff, email: npetroff@bowdoin.edu

■ **Animal-drawn weeders:** Barney Muckle in Kenya writes in response to the request from Roger Sharland (DAN 45, page 85) for Southern Sudan

“Dear Roger Sharland, I am writing to inform you of the work I have done in the past which you are welcome to copy. I designed, made and farmer tested a long pole beam with a range of tools held in a socket by a pin - no tools needed. it is made in a simple workshop by juakalis some of whom I have trained.

I am now retired, live near Naro Moru and you are welcome to see the samples I retain. I have all the drawings which you can use to promote local manufacture here or there if it is possible instead of importing – simple raw materials used but perhaps, at this time, not so simple for the Sudan.

I do not have a very good e-mail so cannot send photos while drawings will depend on the programmes in your pc so a visit is better as I have several other things which may interest you.”

Barney Muckle email: muckleb@africaonline.co.ke

■ **Animal-drawn weeders again:** Richard Casebow, in UK, writes:

“I have just re read DAN 45 part 2 and come across the request from Roger Sharland about animal drawn weeders in Southern Sudan. He was given a number of contacts in Uganda that produce weeders, but I would like to add my own.

I worked with oxen in the Luwero district of Uganda for 10 years (finishing in 2004) developing the use of Animal Traction in an area which has no history of its use. Due to the cost of implements, I developed ways of weeding in maize, groundnuts, beans, sweet potatoes, cassava etc. very successfully, using just the plough (see Plates 34 and 35). This meant that only the one implement was needed. Although purpose built weeders or ridgers will ultimately do a better job, a lot can be done with just the plough. In a situation such as that in Southern Sudan where investment potential is limited, I wonder if starting with what is already available might not be more appropriate.

Plate 34. Weeding maize with a plough, Uganda (R. Casebow)

Plate 35. Weeding sweet potatoes using a plough in Uganda (R. Casebow)

To summarise our methods, the first weeding of maize and weeding of beans and groundnuts was carried out with the mouldboard removed, using just the share and the plough set as shallow as possible (a blunt share caused less damage in groundnuts/beans) tumbling the soil over the share. The second weeding of maize (at knee high), we replaced the mouldboard and, with the plough set as shallow as possible still, weeded the inter row whilst throwing soil in between the plants.

Sweet potato ridging was carried out with either an extension fitted to the mouldboard or a home made extra large mouldboard (Plate 36), first ploughing the field conventionally then forming the ridges by throwing the soil up one way with the big mouldboard, then coming down the other side and completing the ridge by throwing the soil up the other way (Plate 37). A conventional ridger would have been quicker, but this way we didn't need to buy another piece of equipment, which was the more affordable option to our target audience. The first weeding and ridging up was carried out in the same way, before the sweet potato vines became too long and tangled.

Plate 36 (above). A close up of the ridging plough (R. Casebow)

Plate 37 (right). Ridging for sweet potatoes (R. Casebow)

Naturally we used differing lengths of yoke to achieve all this, using our maize yoke to carry out the ridging operations. Crops need to be planted in evenly spaced rows, spaced to match yoke length. Making planting furrows with the appropriate length of yoke will achieve this spacing.

The contact for the NGO with whom I worked in Uganda is manager@newhopeuganda.org and the address, New Hope Uganda, PO Box 16, Luweero, Uganda. Mulu Joseph, who hails from Southern Sudan, is the man to talk to. Also, if I can be of any help or encouragement from here in England, my e-mail is r.j.casebow@reading.ac.uk I hope this can be of some help,"

Richard Casebow. The University of Reading, Crops Research Unit, Sonning Farm Charvil Lane, Sonning, RG4 6TH (Tel +44 (0)118 9691804 email: r.j.casebow@reading.ac.uk)

■ **The European Draught Horse Federation:** Pit Schlechter in Germany writes: "Possibly you know about the European Draught Horse Federation FECTU (www.fectu.org) founded in 2003. We are of course interested in information about animal traction

in general, beyond the limits of Europe. There are certainly huge differences between animal traction in developing countries and Europe, although the use of working animals is still very important in the new EU-member states in middle and Eastern Europe. On the other hand there is at least one issue which asks for international, if not world-wide cooperation: *improving the image of animal traction.*” Input and discussion welcome by Pit.

Dr. Pit Schlechter, 9, rue principale, L-7475 SCHOOS,
Luxembourg (email: pit.schlechter@fectu.org)

■ **Soil ridging systems:** Konrad Hartl from the ‘Three-River-Town’ – Passau in south-east Germany – would like to work with draught animals on a farm in England and he is looking for contacts and information. He has been researching Kemink and Turiel Major ridging systems and is looking for a tool which would form the ridges. Can anyone help? Konrad sends grateful thanks in advance.

Konrad Hartl, Max-Matheis-Str. 21, D-94036 Passau, SW Germany

[Ed note: The Kemink system was developed by the German farmer and inventor Hans Kemink (Fütterling 1984). It is characterized by ridging, frequent subsoiling and controlled traffic. All field operations are performed using a special frame on which different implements for subsoiling, ridging, seedbed preparation and mechanical weed control can be mounted.

In the Kemink system, the purpose of ridging is to increase the surface volume of the soil, enhance the decomposition of organic matter and thereby release nutrients to the soil. Instead of ploughing crop residues down, they are incorporated in ridges in autumn. The purpose of subsoiling in the Kemink system is to loosen the soil to a greater depth than it is possible by ploughing and thereby secure a deeper root growth. With a special type of winged subsoiler, the top 35-40 cm of the soil is subsoiled before, during and after the growing season, and it is possible to maintain the soil in an extremely loose condition. The purpose of controlled traffic in the Kemink system is to avoid recompaction of the subsoiled soil. Controlled traffic is applied by using permanent tracks. (Information from: www.darcof.dk/enews/april04/kemink.html#; see also www.gut-deesberg.de/seiten/damm1.html for the Turiel Major ridging system.)]



*Winged subsoiler used in the
Kemink system*

■ **Electricity from animal power:** Antonio Perrone writes in with more information on the DAP operated pump (see DAN 45, page 85).

“Taking into account the important role that DAN has in the diffusion and in the promotion of the draught animal technology, I consider an honour and an obligation to inform you that, after several years of studies and prototypes, I have built equipment capable of transforming the draught animal power into electricity. This equipment allows, in particular, a substantive improvement of the mechanical pumps moved by animal power.

In this new model of equipment, the draught animal power is mechanically converted in electric energy and, then, this electricity is used to move a pump that lifts water. For the reasons hereafter expressed, the use of these pumps will increase

several times the availability of water in arid areas.

The research, financed by a grant from the Banca di Credito Cooperativo dei Castelli Romani of Castel Gandolfo (Roma), has demonstrated the possibility, for a small draught animal, to lift 4 cubic meter/hour of water with a delivery head of 4 meters. According to an estimate (presented in an article of DAN 40), about 250 million working animals provide the draught power to approximately 28% of the world's arable land, equivalent to 52% of total cropping land in developing countries. Also if considering that only a very small percentage of this animal would be used to lift water, certainly the potential of the studied technology is enormous.

Further information on the research done, the operating prototype, the results obtained and further future developments are available on the website: <http://www.masseriaccoppola.it/dap/>. For now the main advantages in using this system can be considered the following:

- a very little cost of the water obtained: it is estimated that the system will cost several times less than a photovoltaic plant of equal capacity. Most of the cost are local and non in foreign value
- the system allows the supply of water from wells deeper than those exploited with mechanical lifting systems
- the system allows to pump water from iron or plastic tubewells. This can avoid the closure of the well, now so frequent, due to fall down of the wall of the same
- in particular cases is possible to envisage the use in a shorter time of an accumulated amount of energy. This to obtain more instant power and then to reach more deep water lays
- with the system the animal can operate far from the well and then in a safer and cleaner way. In fact one of the problems in using animal power to lift water with traditional equipments is that manure, other biological products and the moved soil can pollute water.
- use of water cleaning and sanitation equipment, ozonizer and reverse osmosis plant for medical premises.

The idea to use draught animal power to produce electricity has been studied also in South Africa and India and presented in the review of the IEEE (http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?tp=&arnumber=821897&isnumber=17777) and in DAN 40, pages 60-61 (<http://www.vet.ed.ac.uk/CTVM/>).

A University in India (<http://www.ciae.nic.in/uae.htm>) has established a working group for the Adoption and promotion of improved rotary mode applications of draught animals for post harvest operation, water lifting and electricity generation. Several patents have been found on the website of espac@net. We refer to approximately thirty patents requested in Europe, China, USA and Japan.

The equipment presented in the mentioned articles and those patented don't seems to be capable to solve most of the problem of costs, reliability and capacity to produce electricity as the prototype below that we have developed and that uses a new model of rotary speed increaser."

Further information on the equipment can be requested from

Antonio Perrone, Via Pieve di Cadore 30, 00135 Roma I
(Tel +39 3496934669 or +39 (0)63012328; Email: aperonne@mclink.it or info@masseriaccoppola.it; www.masseriaccoppola.it/dap)

FORTHCOMING EVENTS



ISRP 2009 – First announcement

The XIth International Symposium on Ruminant Physiology (ISRP)

Clermont-Ferrand, France – September 6 to 9, 2009
(the preceding edition was in Copenhagen in 2004).

The general topic selected for 2009 is: “Ruminant physiology: digestion, metabolism and effects of nutrition on reproduction and welfare”.

We are asking for your contribution in the following ways:

- Please help us to develop a good scientific programme by sending us your proposals for plenary lectures and sessions: what specific topics would you like to hear about? Do you have suggestions of speakers for these topics? Please send your ideas and proposals before March 31st, 2008, to the symposium’s address: isrp2009@clermont.inra.fr
- Please make sure that all your colleagues that could be interested in the symposium are informed about it (including people outside your own institute)

You will find preliminary information on the symposium’s website: https://colloque.inra.fr/isrp_2009_eng/ (for French-speaking people/pour les franco-phones: https://colloque.inra.fr/isrp_2009). The webpage will be regularly updated. Declarations of intention for oral communications and posters will be opened later on this year, you will be informed by email.

If you have further inquiries, please email us: isrp2009@clermont.inra.fr

We hope to see you in Clermont-Ferrand.



WEVA

11TH WORLD CONGRESS 2009 GUARUJÁ, SP BRAZIL

Welcome

11th Congress of the World Equine Veterinary Association



Guarujá - São Paulo / Brazil, September 24 - 27, 2009
Casa Grande Hotel Resort & Spa

Abstract submissions are only accepted online
and must be completed on by 21 March 2009
www.weva2009.com.br



MEETING REPORTS

Regional Workshop on Animal Welfare

Theme: Animal welfare, livelihoods and environment

Fred Ochieng, ATNESA and KENDAT, Nairobi, Kenya



Animal Welfare Action Kenya (AWAKE) in collaboration with Animal Traction Network for Eastern and Southern Africa (ATNESA) for the first time in Africa organized the 1st Regional Workshop on Animal Welfare. The workshop theme was 'Animal Welfare, Livelihoods and Environment'. The Workshop was held from September 24–28, at Kenya School of Monetary Studies (KSMS), Nairobi, Kenya. The workshop provided an unprecedented level of presentations, displays, information market place and action events during the Animal Welfare fun day. The workshop attracted a total of 65 participants (Plate 38) from local NGO's, government ministries, donor funded projects, research and academic institutions, private companies, farming communities among others, many of which came from Eastern and Southern Africa including, Rwanda, Uganda and Ethiopia and guest participants from Sweden and Brooke - UK.

Plate 38. Participants at the workshop at the Kenya School of Monetary Studies, Nairobi (ATNESA)

The workshop was designed to integrate animal welfare in the attainment of sustainable rural livelihoods and sustainable natural resource management. There were three underlying objectives:

- Facilitated exchange of information and experiences, linking animal welfare, livelihoods and environment
- Identified and spotlighted the key issues, concerns and trends in animal welfare and utilization, and developed strategies for short to long-term solutions
- Facilitated strategic, multi-disciplinary and cross-sectorial collaboration and partnership in the development and promotion of suitable animal welfare and environmental practices.

The workshop provided a highly interactive process for information exchange, guided by session facilitators. This was achieved through thematic keynote presentations, backed by field experiences and small thematic group discussions and plenary reports. Around the thematic areas, a keynote presentation was made and backed by related national interventions and experiences on the subject matter. Areas and means of collaboration with other countries represented from around the world came out clear in the plans, backed effectively by the networking philosophy of ATNESA. An information Market Place constituting picture stories and poster presentations provided a colourful forum for nations represented, farmer organizations, NGOs, private sector companies, etc. to present their work niches and contributory roles in animal welfare.

The workshop featured the current developments in animal traction including conservation agriculture and increasing use of equines for tillage and transport operations. Under the ATNESA umbrella, AWAKE and her member and collaborating organizations initiated the process of characterizing and mapping out integrated approaches and animal welfare development niches in setting the direction towards undertaking 5 to 10-year strategic plans for overall animal welfare improvement.

During the workshop, AWAKE hosted an Animal Welfare Day that took the form of an animal welfare, public sensitization forum and animal clinic where dogs, donkeys and other animals were vaccinated and treated (Plate 39). This occasion helped bring practical animal welfare concerns to the fore. It was graced by senior government officials and other dignitaries.

Five working groups were formed to re-look into various issues of policy, acceptable welfare standards and standards of care, animal welfare and ethics, etc. These include:

1. **Animal welfare policy:** The working will among other things, identify policy gaps in animal welfare policy (specify country), provide a clear definition of “Animal welfare”, define clear enforcement processes pertaining to fines and penalties, put in place an inspectorate unit for monitoring, evaluation of education and sensitization, etc..
2. **Welfare standards and guidelines, and standards of care:** This working groups will define and elaborate information on the minimum/acceptable standards and guidelines for utilization/ consumption, and standards for care; develop a model for selected animals which can be customized for the region; and examine practicalities especially for community implementation/ operationalisation.
3. **Curriculum for animal welfare service providers:** The working group is to come up with a well defined curriculum on Animal Welfare that will be incorporated in the school curriculum.
4. **Community training needs and packaging of information:** The working group is to identify the training needs of the community and best ways of packaging of the information for ease in usage on animal welfare, livelihoods and environment usage.
5. **Indigenous knowledge and ethics:** The working group is to consolidate all relevant indigenous knowledge on animal welfare, livelihoods and environmental and package it in a usable and applicable manner in collaboration with all the relevant policy makers as well as look into ethical issues affecting animal welfare.

These outputs from the working groups will be of special interest to governments in the different regions, key Ministries, institutions of learning, farmers, manufacturers and traders of Agro - vet products, research institutions, donors and many others in promotion and support of animal welfare.

AWAKE and ATNESA is indebted to the Brooke-supported Heshimu Punda project for taking a lead in organising and sponsoring the workshop. Grateful acknowledgement is also extended to many organizations and companies that offered their support, and media houses such as Citizen Radio, Waumini FM and Radio Simba for publicity as well as IFRTD, FFS and Brooke UK for sensitization through newsletters and websites.

PferdeStark 2007

Europe's most important event demonstrating modern draught horse use

Peter Herold, German Draught Horse Association (IGZ), Germany

On the last weekend of August, every second year the PferdeStark event takes place at the open-air museum at Detmold, North Rhine-Westphalia, Germany. The aim of PferdeStark is to demonstrate the everyday use of draught horses in agriculture and forestry. It has become the most important event for the working horse in Europe. Last year, on August, 25th and 26th, it became again a great success. More than 17,000 spectators watched 280 horses, 220 of them draught horses, of 20 different breeds from 10 different nations working modern horse-drawn equipment in agriculture and forestry, as well as taking part in different competitions.

Additionally, an extensive whole-day show program demonstrating the different uses of horses, from work to driving, different forms of riding, circus lectures, different breeds, and even stunts cast its spell over the spectators.

Teamsters from many different countries took part and showed their horses and equipment. This time, 74 draught horses and 2 cows were working all day long showing what kind of modern equipment exists

*Plate 40. HSKO-forecart with Amazone D8-30 drill at
PferdeStake2007, Germany (K Ohrndorf)*

Plate 41. HSKO forecart and Amazone D8-30 drill in action, Detmold, Germany (K Ohrndorf)

Plate 42. HSKO forecart with Kuhn hay-tedder at PferdeStake2007, Germany (K Ohrndorf)

Plate 43. HSKO forecart with a combination of a Hatzenbichler currycomb and a pneumatic drill, Detmold, Germany (K Ohrndorf).

and how it works. Harrows, cultivators, spreaders, drills, the whole hay-equipment, mowers, tedders, rakes and bale movers could be seen in work (eg Plates 40, 41, 42, 43). Different forecarts, some US made, but more from Germany and the UK, were combined with different machines to demonstrate that even modern tractor equipment can be used with horses and can improve the possibilities of draught horse work a great deal. Our French friends from PROMMATA (www.prommata.org) demonstrated their sophisticated machinery constructed following the ideas of Jean Nolle. And even work in the wine yard was demonstrated and explained.

On a separate spot the use of draught horses and modern equipment in forestry was demonstrated. It became clear that not only logging can be done with horses in a very economic and ecologically sound way. But also the support of natural

regeneration or the preparation of planting, as well as the controlling of unwanted plants like blackberry, fern or black cherry are kinds of work the horse is suited best for. Some friends from Belgium demonstrated the traditional logging of heavy trees by three horses in line. The horses had never worked together in a team before, but it looked like they were doing so every day, a demonstration of the high quality of well trained draught horses.

In addition to these all day-demonstrations, different competitions in ploughing, logging and carriage driving took place. Again, the international participation at Detmold made it something very special. In addition to the work demonstrations and competitions, a show program of highest quality with participants from all over Europe showed the public the many different possibilities of the use of horses.

One big cloud lay over 'PferdeStark 2007'. Our dear friend Charlie Pinney, Europe's pioneer of modern draught horse use, and the spiritual father of the Federation of European draught horse associations, FECTU (www.fectu.org), could, for the first time in the history of PferdeStark, not attend because he already was too ill. Not long after Detmold, on September, 10th, 2007 Charlie died from cancer much too young. We like all draught horse enthusiasts in Europe and beyond will keep him in mind for ever, and I'm sure he'll be with us in thought at Detmold every time we'll meet there in the future.

The next PferdeStark event will take place on August 29th and 30th, 2009, again at Detmold open-air museum. You can find all kind of information on www.pferdestark.de (in English, French and German). Don't hesitate to contact the German Draught Horse Association, IGZ (www.ig-zugpferde.de, info@ig-zugpferde.de), if you have any questions. Nobody interested in modern draught horse work should miss the 2009 "PferdeStark", no matter which country you come from. See you at Detmold in 2009, you're welcome!

Contact: Interessengemeinschaft Zugpferde e.V. (IGZ), Bundesgeschäftsstelle, Peter Herold, Uferstr. 29, D-73660 Urbach, Germany (Tel: ++49-7181-8878953; Fax: ++49-7181-8878954; email: info@ig-zugpferde.de; www.ig-zugpferde.de)

Launching of Lesotho Network of Animal Traction (LENAT)

Lerato Kepa

The Department of Crops of the Lesotho Ministry of Agriculture and Food Security hosted a one day workshop on *Animal Traction Development* that was held on June 18th 2008. The idea was initiated by the Engineering Division of the above department for the betterment and improvement of animal use and management (see Plate 45) and the establishment of the draught power network . The Department took advantage of the presence of Professor Paul Starkey in Lesotho, a well known figure in as far as animal traction is concerned worldwide, for general advices and assistance in the organization of the workshop.

Plate 44. Draught cattle being used for land preparation in Lesotho (A Pearson)

The following were the objectives of the workshop:

- Bring together the stakeholders on issues pertaining to animal power and to pave the way towards launching a network.
- Prompt discussions on current work on draught animals, their use and management.
- Share experiences amongst stakeholders pertaining to animal power.
- Work out an action plan for improvement/ development of animal power in Lesotho

The participants were from five categories; local government ministries, non-governmental organizations, international organizations; the Faculties of Agriculture and of Humanities (Development studies) of the National University, the FAO, Dr. Peta Jones from Donkey Power Organization South Africa, Mr Herbert from Mealie Brand RSA, Dr Bruce Joubert from The University of Fort Hare, Appropriate Technology Section of the Ministry of Communications Science and Technology, and farmers.

Accomplishment

At the end of the workshop, a network composed of local stakeholders was formed and launched as Lesotho Network on Animal Traction, LENAT. The composition of the Network is as follows:

Motanyane MOTAKE, Ministry of Agriculture and Food Security (msmot@leo.co.ls)

Lerato KEPA, World Vision Lesotho (lerato_kepa@wvi.org)

Dr T. TSIKOANE, National University of Lesotho

Mr Metsekae MOTOBOLI, National University of Lesotho

Mr Moshe Tsehlo, PELUM

Lineo Lekhanya, Rural Selfhelp Development Association

Mr M. Molefe, Ministry of Public Works and Transport

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Contributors to DAN 46

- **Mahama Adams *et al.***
 Agricultural Research Center-Legon, University of Ghana, P.O. Box 38, Legon, Accra, Ghana
 email: a_mahama@hotmail.com
- **André Martinho de Almeida and Luís Alfaro Cardoso**
 Instituto de Investigação Científica Tropical., CVZ – FMV, Av. da Universidade Técnica de Lisboa, 1300-477 Lisboa, Portugal and ATA – Associação Tropical Agrária, Portugal
 email: aalmeida@fmv.utl.pt
- **B.K. Behera *et al.***
 College of Agricultural Engineering and Technology, Orissa University of Agriculture and Technology, Bhubaneswar-751003, India
 email: bijucaet_1964@yahoo.com
- **Alan Chadborn**
 54, Somerford Way, London SE16 6QW
 Tel: 020 7231 8378; email: achadborn@talktalk.net
- **Roger Connan *et al.***
 World Association for Transport Animal Welfare and Studies (TAWS), Hardwick Court Farm, Hardwick Lane, Chertsey, Surrey, KT16 0AD, United Kingdom
 email: info@taws.org
- **A K Dave, Pravinkumar and V. M. Victor**
 Faculty of Agricultural Engineering, IGKV, Raipur- 492 006, India
 email: anoop_dave@hotmail.com
- **Terry Davis**
 HarnessAid, Harness development Agency, 5 Leamore Common, Wistanstow, Craven Arms, Shropshire SY78DN
 email: harnessaid@yahoo.co.uk
- **Lokesh Gupta *et al.***
 Department of Farm Machinery and Power Engineering, College of Technology and Engineering, Maharana Pratap University of Agriculture & Technology, Udaipur, Rajasthan (India)-313001.
 email: lokesh_pup28@yahoo.co.in
- **Peta A. Jones**
 Donkey Power CC, Facilitation and Consultancy Services, PO Box 414, Tshitandani/ Makhado, 0920, South Africa
 email: astute@lantic.net
- **I Wayan Kasa**
 Biology Department, Udayana University, Bukit Jimbaran, Bali, Indonesia
 email: iwkasa@yahoo.com
- **Elsamawal Khaili Makki and Nada Abdeen Sulieman**
 School of Rural Extension, Education and Development, Ahfad University for Women, Omdurman – Sudan
 email: sammakki@hotmail.com

- **Sanjay Khar, Abha Tikoo and C.K.Lidhoo**
Sher-e-Kashmir University of Agricultural Sciences and Technology - Jammu Dhiansar, Bari
Brahmna, Jammu-181 133. J&K India
email: sanjaykhar2007@rediffmail.com
- **M.S. Sevda *et al.***
Department of Farm Machinery & Power Engineering, College of Technology and
Engineering, Udaipur (Rajasthan)-313001 (India)
email: lokesh_pup28@yahoo.co.in
- **G.S.Tiwari *et al.***
Department of Farm Machinery and Power Engineering, College of Technology and
Engineering, Maharana Pratap University of Agriculture and Technology, Udaipur,
Rajasthan (India)-313001.
email: tiwarigsin@yahoo.com
- **R.C.Upadhyay *et al.***
National Dairy Research Institute, Karnal-132001, India
email: ramesh5304@rediffmail.com
- **R. Trevor Wilson**
Bartridge Partners, Bartridge House, Umberleigh Devon EX37 9AS, UK.
Email: trevorbart@aol.com