

Harnessing equine energy

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The Harness Development Agency

The Harness Development Agency was established, as our title suggests, to focus attention on the efficient harnessing of working equines. We are fully qualified harness and collar makers and long serving practitioners in harness manufacture for both the UK and Euro-zone markets. It was through our involvement in overseas projects in Central America and Kenya that we became fully aware of the problems endured by working equines and their owners. It felt that the subject of harnessing is not receiving the attention it deserves. From Pakistan to Ethiopia to Mexico we see the same recurring pattern of injuries to the breast, shoulders, neck, back and hindquarters. Most of these are caused by the use of ill-fitting, inappropriate harness systems. There are no doubts that with the right approach these problems can be resolved.

The objective of Harness Development Agency is to educate, advise and teach harness-manufacturing techniques to indigenous people in the hope of improving not only the lives of equines, but also their owners. Harness is of course not the only issue of concern. There are many other welfare related problems that all need attention. Dealing with these calls for collaboration between other interested parties.

There is nothing new to be added on the subject of harnessing animals. Two thousand years of history has taught us everything we need to know. The criteria required for successful harnessing already exists and if followed will produce positive results. It can be said that if we have not solved most of the problems by now, we never will.

It is clear that it is in developing countries where most of the difficulties are experienced. Endemic poverty, confusion and lack of understanding of animal draft are contributing factors to equine suffering. In efforts aimed at improvement, the call is always for '*minimal cost harnessing systems*' that individual equine owners can quickly 'knock together' themselves. This do it yourself approach is unrealistic. It is something we need to move away from, as it is the cause of many of the problems. Harness making should be recognised in its own right as a skilled craft and trade. The emphasis should be put on skills training and education. This serves the dual purpose of creating employment and improving the working lives of equines.

One of the ways that improvements could be made is to introduce a 'regulated harnessing system' that is of fit for the purpose. There are several reasons for this standardised approach. It makes for easier manufacture and maintenance and would prove to be a cost effective method of production. The skills training process could be shortened by being more focused and the transfer of this technology to other locations made easier.

Unchanging principles of animal draft

The four unchanging principals of animal draft are: steering, transmission, weight distribution and braking. Correspondingly, there are four component parts of harness designed to accommodate these. They are: the bridle, collar, pad and breeching.

Steering

Steering is conveyed through the reins and bit. The bridle is simply a device to carry the bit. There is debate as whether to use blinkers or not.

Transmission

Transmission is effected through the use of a collar and traces. Collars are the area of greatest concern and least understood. There are two types to consider: breast collar and full collar.

Breast collars

The breast collar is the most commonly used and consists of a wide band around the breast and held in place by a neck strap. The traces are attached to either end of the breast collar and energy is transmitted through these to the point of impact.

Advantages: Breast collars are cheap and easy to manufacture, one size fits all and are interchangeable. They can be used to good effect.

Disadvantages: By being positioned below the optimum point, maximum draft cannot be achieved. Therefore approximately 25% of the draft is lost. To avoid serious injury they must be used in conjunction with swingle trees. There is a tendency for shoulder movement to be restricted.

Full collars

Made from leather and stuffed with straw. They are designed to carry the hames onto which the traces are attached. In effect, they act as a cushion between the hames and the animal. The size and shape of collars is of prime importance. They must be stuffed in such a way as to allow clearance to the throat and withers and to keep the traces clear of the animal's sides.

Advantages: Full collars allow the animal to achieve maximum draft by dispersing the applied forces evenly over the shoulders and neck without causing hindrance to movement. This is highly desirable in terms of efficiency.

Disadvantages: Collar making requires many years of training to perfect and is a highly skilled craft. They are difficult to make and labour intensive. Size matters, therefore must be made to measure. As a rule: 'one horse, one collar'. Collars that are too big will move and the resultant friction will cause injury. If too small, will cause difficulties with breathing. Collar widths are also important.

Weight distribution

The weight of the vehicle (loaded or unloaded) is taken through the shafts across animals back and requires a framed and padded back pad. It must allow for complete clearance of the vertebra and be held in place using a girth. A back band and tugs are also required.

Braking

There are two types of breeching: false or full. Full breeching consists of a broad band around the hindquarters and is supported by the use of hip straps. It is attached to the shafts and takes the full weight of the vehicle when going down hill or reversing. The false breeching is a strap attached between the shafts, (from shaft to shaft) behind the animal and performs the same function. Care needs to be taken in size of animal in comparison to the vehicle when considering the use of false breeching.

Conclusions

When the above four principals are fully understood and complied with any four-legged beast from a dog to an elephant can be harnessed effectively. The component harness parts can be adapted to local and cultural conditions and allow for the use of alternative natural, locally sourced, materials. With the reported increase in the use of equines in developing countries, it is more important than ever to see a collaborative effort by all concerned, in providing a better understanding and training initiatives in the use and welfare of equines.