



agriculture & rural development

Department:
agriculture
& rural development
PROVINCE OF KWAZULU-NATAL

Beef Production: The Basics

Transporting Cattle

Introduction

Transportation of livestock is an integral phase of any livestock enterprise. The ability to transport animals means that the producer is not entirely dependent on local markets. Should markets in the immediate vicinity be over-supplied, the producer is able to overcome this by selling on markets further afield.

Problems related to transportation

Transportation of cattle leads to:

- Stress to the animal, which could lead to loss in production, and/or sickness, and even death.
- An effect on carcass quality, a consideration of importance where the abattoir is the destination.

Mode of transport

Many factors should be considered when selecting the mode of transport. Cost is always important, but must be measured against the quality of, and potential losses incurred in, transport.

- Herding by road was the only form of transport available in the not-too-distant past, and it is still the main method of moving cattle on the farm, and often from farm to farm. Where saleyards or railway loading points, are close by, it is still the cheapest way to move animals. When animals are moved at their natural pace, and if the distance is not too great, stress as well as loss (*e.g.* bruising, shrinkage) is minimal. A comfortable distance for beef cattle to walk in a day is 10 to 12 kilometres.
- Transport by rail has been a major factor in allowing the centralisation of the industry and in opening new markets. Rail transport should continue to fulfil this role for a long time to come, although it has become less important in the transportation of slaughter stock.
- Road transport is taking over a major portion of livestock transportation due to the ease and convenience of transporting cattle by road. It is an important means of reducing stress to livestock. Animals in transit undergo "shrinkage". This is due to reduced water intake, and to poor food consumption which is characteristic of animals in transit. Shrinkage can amount to 4 to 6 % for trips of less than 70 km, but can be as high as 8 to 9 % for distances exceeding this. Road transport reduces travelling time, and partly overcomes shrinkage.

Selecting the mode of transport

When deciding on the mode of transport, convenience, and cost, must be the major criteria. Allowing animals to walk to their destination, time permitting, is cost-effective, and reduces stress. The only limitation is distance. Although many animals can travel great distances on the hoof, this is not advisable where the abattoir is the destination. Should a farmer decide to herd animals over distances greater than 30 km, care should be taken to plan the route well. Rest and watering points must be identified over the whole route, and the distances travelled each day must not be excessive.

Rail transport is usually cheaper than is motor transport, and should always be considered for all forms of livestock. A limitation of rail transport is that the farmer has to pay for the full use of a truck, whether it is full or empty. Farmers need to plan the moving of a consignment of animals well ahead of time in order to request the required number of trucks. Cattle trucks containing livestock are carefully monitored, and taken to their destination as quickly as possible. In spite of this, delays do occur. For this reason, rail transport is not always ideal for moving animals to the abattoir.

Road transport is the mode of choice in most cases, because of convenience and efficiency. Animals can be moved to their destination within a matter of hours. There are usually no long delays between requesting the transport, and the actual moving of the animals.

Truck design

The following should be taken into account when evaluating the suitability of a vehicle, or railway truck, for cattle transport:

- Floor space: This should not be less than 1,4 m² per adult bovine. A small calf will require 0,3 m². Where there is a height factor to consider, the roof height should not be less than 1 600 mm. Should the animals have too much room, they can be thrown around inside the vehicle when it is moving off, or coming to a rapid halt. With the correct number, animals tend to lean against one another, and against the sides of the vehicle. This prevents excessive movement. Partitioning in large vehicles is therefore essential.
- Floors: These should be solid and impervious, and, most important, must be fitted with grids or cleats to prevent slipping. There must be no spaces between the floor and the side panels.
- The sides of the vehicle, and the partitions, must be strong enough to hold the heaviest animal. Preference should be given to sides with solid surfaces, and openings should not allow legs or heads to become stuck. The minimum height for both sides and partitions is 1 800 mm.
- Ventilation must be adequate. This should not prevent the inclusion of adequate protection against bad weather, sun, rain and wind. Exposure to exhaust fumes must be avoided because this can cause discomfort, and suffocation.
- Gates warrant attention. A small loading gate has the advantage that animals cannot turn around, until on the vehicle. Cattle, however, often crash against the sides of a narrow gate, thus injuring themselves. Off-loading gates could span the full width of the truck. This would be possible by designing tip-up gates. The gate used for loading animals ideally, should be narrow, but only if it is to be used in conjunction with a loading crush.

Stress and transport

Animal health and injury

The stress associated with transport can cause animals to become ill. Pregnant cows are particularly susceptible. Symptoms very similar to those associated with milk fever are often precipitated. This is related to calcium metabolism, and can be treated in the same way as milk fever. Prevention is achieved by restricting feed intake for two to three days before loading. Feeding hay, at maintenance levels only, is recommended.

Transit fever is another disease encountered. This is a form of pneumonia caused by a *Pasteurella* species. A vaccine is available to treat animals which are due to travel.

Injury to animals is a major source of concern, not only because the public image of the meat industry is adversely affected by media reports of animal maltreatment, but also because the producer suffers major losses due to injury, and bruising. Financial losses associated with injury can be minimised through animal knowledge, and improved truck design.

It is not advisable to transport cows during the last trimester of pregnancy. Should the need arise to transport cows and suckling calves, it is advisable, in order to prevent injuries, to transport them in separate trucks. However, with trips exceeding two days, cows and calves should be grouped together, since the consequences of excessive stress to the calf could exceed potential loss due to injury.

Carcass quality

The tenderness, flavour, and colour of meat is adversely affected by excessive exercise, or stress to the animal, prior to slaughter. Meat also loses its ability to retain fluids, making it unsuitable for sausage making.

The red meat industry is rapidly losing its market share to the broiler industry. Poor meat quality contributes to this trend. The producer can help prevent further erosion of his sales by giving this aspect attention. This can be done by:

- Minimise animal movement prior to slaughter. The meat of animals accustomed to walking will not be adversely affected by a normal amount of exercise. Unnecessary running, or additional exercise, however, will have detrimental effects.
- Avoid stress at all costs. This can only be achieved by good stockmanship, with careful handling and selection. There is no doubt that certain animals are more susceptible to stress. These must be culled from the herd because their progeny have a high probability of having the same problem, and they tend to distress more docile animals in their group when being taken for slaughter.