

# The Future Without Pithing

## SUMMARY

In UK slaughterhouses, cattle have traditionally been pithed following captive-bolt stunning. This kills the animal by physically destroying the brain stem (the centre which controls the breathing reflex) and other parts of the central nervous system. Pithing also eliminates spinal reflexes, reducing kicking and minimising the risk of injury to slaughtermen, when in close contact with animals during shackling, hoisting and sticking.

Since 1 July 2001 it has not been permissible for animals slaughtered for human or animal consumption to be pithed following stunning. This has serious implications for both animal and human welfare. This leaflet presents the options available under current legislation.

It must be remembered that the **quality** of sticking is as important as minimising the stun-to-stick interval.

**Operatives must be constantly on the lookout for signs of an ineffective stun and must know the appropriate action to be taken to prevent animals suffering unnecessarily.**

## Introduction

The process of pithing involves inserting a cane, usually a flexible wire or polypropylene rod, through the hole in the head made by the captive-bolt. It is then thrust caudally, through the brain to at least the level of the brain stem and, if it is long enough, into the spinal cord. The cane is then slid back and forth to cause maximum damage to the brain and upper spinal cord. Initially the animal will show violent muscle contraction but, thereafter, reflex muscle movement is inhibited.

## A change to the law

As a result of the European Commission Decision 2000/418/EC, from 1 July 2001 it is no longer permissible for animals slaughtered for human or animal consumption to be pithed following pre-slaughter stunning. This has been introduced by the EC as part of measures to prevent the possible spread of BSE, following the discovery of traces of brain material in the circulation of pithed cattle.

This new ruling which is implemented in the UK by ***The Restriction on Pithing (England) Regulations 2000***. In the Regulations, 2.-(1) states that

'No person shall pith any bovine, ovine or caprine animal prior to slaughtering it for human or animal consumption.'





The Regulations also make a consequential amendment to the ***Welfare of Animals (Slaughter or Killing) Regulations 1995 (WASK 95)***, insofar as they extend to England. In the Regulations, 3A.-(1) states ‘Nothing in these regulations shall be taken as permitting the immobilisation (see definitions below), on or after July 2001, of any bovine, ovine or caprine animal prior to slaughtering it for human or animal consumption.’

## Definitions

Within ***The Restriction of Pithing (England) Regulations 2000*** the following definitions apply:

- to ‘pith’ an animal is to lacerate, after stunning, its central nervous tissue by means of an elongated rod-shaped instrument introduced into the cranial cavity
- the ‘immobilisation’ of an animal means the laceration, after stunning, of its central nervous tissue by means of an elongated rod-shaped instrument introduced into the cranial cavity

## Implications for the industry

It is generally accepted that these new regulations may result in an increased risk to animal welfare and operator safety (human welfare). Both are unacceptable to all concerned and the latter will also bring with it the possibility of expensive litigation. The Humane Slaughter Association (HSA) is primarily concerned about animal welfare, although it is accepted that, in this situation, animal and human welfare are inextricably linked.

## Animal welfare

Pithing physically destroys a sufficient amount of the central nervous system to result in the immediate death of the animal. As a result of the ban on pithing, animals’ brain stems will be left intact and there will be the possibility that some animals may recover their breathing reflex if no further action is taken. In order to eliminate this possibility, operators must minimise the stun-to-stick interval or employ a stun-kill method.

However, without pithing, the stun-to-stick interval may, in some cases, increase while the involuntary kicking movements are allowed to cease prior to shackling. If so, then problems of inefficient stunning may be exposed. These could be due to poor accuracy and/or underpowered shots caused by the use of incorrect cartridges (powerloads), or by lack of regular cleaning and maintenance of the stunner.

## Operator safety

The risk of injury to the slaughtermen must also be considered. The important areas to review are:

- shackling and hoisting
- sticking
- first dressing procedures, eg removal of the forelegs

Changes to current practices must be carefully thought about to minimise any danger.



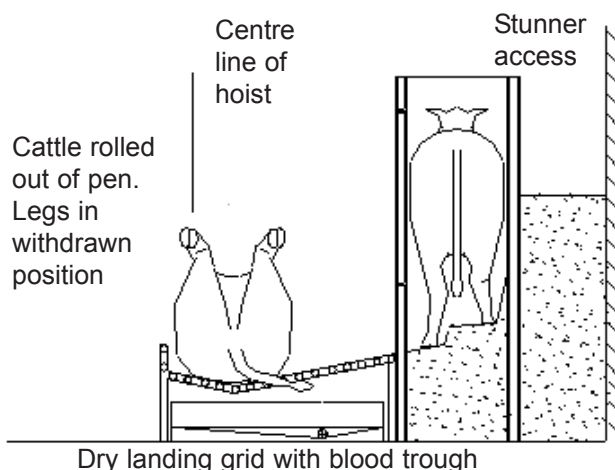
## Options available to the industry

### Immediate

- It is estimated that 35 per cent of cattle abattoirs currently do not pith. Therefore, liaise with management and/or staff who have already made the necessary adjustments.
- Take steps to ensure absolute accuracy of stunning. This may require retraining of operatives and the appropriate use of head-restraint equipment.
- Ensure captive-bolt equipment is sufficiently powerful and, if not, replace with a more powerful model. Alternatively, consider using a free-flying bolt as opposed to a returning bolt. Free-flying bolts penetrate further into the brain and are generally thought to produce less reflex kicking in the carcass.
- Ensure that cartridges used are of sufficient power to effectively stun the size of animals being processed. It is best practise to use the most powerful charge appropriate to the size of animal, and available for the model of captive-bolt.
- Ensure proper cleaning and maintenance of captive-bolt equipment is carried out daily. It is now possible to obtain equipment with which the velocity, and thus the impact energy, of the captive-bolt can be tested. This is a very useful aid to good practise, which allows the performance of the equipment to be continually monitored.

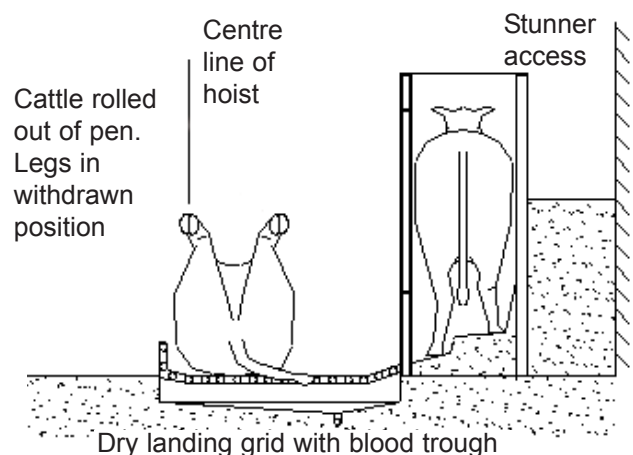
### Short term

- Assess the current shackling and sticking procedures and change as necessary. This may require some retraining of staff.
- Stick immediately, prior to shackling (WASK '95 requires sticking 'without delay'). This may necessitate the construction of a dry-landing grid on which the animal can be bled, and which will allow the blood to drain away without contaminating the hide (see Figures 1 and 2). The carcass will be allowed to bleed out before being hoisted.



**Figure 2**  
**Floor level stun box and roll out cradle**

**Figure 1**  
**Raised stun box and roll out cradle**



**NOTE:** Before making any changes to abattoir structure or procedure you should discuss them with your OVS



- Electrical immobilisation post-stun. Under WASK 95, electrical immobilisation cannot be carried out within 30 seconds of bleeding. Therefore animals will have to be stuck immediately after exit from the stunning box, and left to bleed out for a minimum of 30 seconds, before immobilisation using a low-voltage electrical current. This might be during shackling and hoisting. Electrical immobilisation may also be desirable before the first dressing operations, further along the line, as reflex activity in a non-pithed carcass can persist for up to eight minutes. Advice must be sought on the type of electrical equipment available for immobilisation purposes. Using electrical stimulation apparatus, or adapted electrical stunning apparatus, may not be appropriate, as there have been reports of carcass damage and meat quality problems.

### Medium/long term

- Change the layout or structure of the shackling and bleeding area. This may be needed to create more room for operators to work safely; to buy time, (eg to install a horizontal conveyor/bleed table or similar, so that the dressing line does not outpace the killing line); or to enable carcasses to be hoisted higher, so that sticking is carried out at eye-level and movement of the forelegs takes place above the operator's head.
- Change the stunning method. The only current alternative is an electrical system.

### Important

Whichever option is chosen, the quality of sticking is as important as minimising the interval between stunning and sticking. **Both carotid arteries, or the vessels from which they arise, must be severed.** Scientific evidence would support the use of a thoracic stick for cattle, in preference to a neck stick.

Operatives must be constantly on the lookout for signs of ineffective stunning and they must know the appropriate action to be taken to avoid any pain or distress to the animal (see *Captive-Bolt Stunning of Livestock 3rd Edition* (2001) Humane Slaughter Association).

In view of the very real increased risks to the killing-line operatives, appropriate protective clothing must also be worn at all times.

### Further information

British Meat Processors Association

0207 329 0776

Food Standards Agency

0207 238 5381

#### WARNING: DISCLAIMER OF LIABILITY

In no circumstances can the HSA accept liability for the way in which the equipment in this leaflet is used: or for any loss, damage, death or injury caused thereby, since this depends on circumstances wholly outside the HSA's control.

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The Old School . Brewhouse Hill . Wheathampstead . Herts AL4 8AN . UK

Tel: +44 (0)1582 831919 Fax: +44 (0)1582 831414 Email: [info@hsa.org.uk](mailto:info@hsa.org.uk) Website: [www.hsa.org.uk](http://www.hsa.org.uk)

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