

Staying safe on farms

Following the severe injury of a colleague, this article discusses ways that the farm animal clinician can reduce the risks, both to themselves and to farm staff and animals, while working on farms. Risk assessment is not just a tedious piece of red tape but as essential as scrubbing up before surgery, and should be undertaken before any job is embarked on. Risks cannot be eliminated, but can be kept to a minimum.

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Katrine Bazeley Bsc BVSc CertWEL MRCVS, veterinarian, and Andrew Davies BVetMed CertCHP MRCVS Managing Director, Synergy Farm Health, Evershot, Dorset

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Many who read this article will be aware that one of the authors' Synergy colleagues, Jereme Darke, suffered a very severe head injury, caused by a cow in January 2012. He was airlifted from the farm to Frenchay Hospital in Bristol where he remained in critical condition for some time. He continues to make a gradual recovery, and everyone hopes he will in time return home and come back to work. He has recently come to the practice for some days out on farm. Jereme's accident was nobody's fault — he was doing an ordinary job blood testing beef cows through a crush — but his terrible experience should serve as a reminder that everything possible should be done to minimise the risks on farms.

The Health and Safety Executive (HSE) state that 'farming is a hazardous occupation. The industry represents 1.8% of the workforce and 19% of the reported fatal injuries each year' (Health and Safety Executive Farmwise, 2009). In January 2013 the *Farmer's Weekly* reported statistics from the HSE which showed that there were 33 fatal farm accidents between April 2011 and March 2012 (www.fwi.co.uk). *The Independent* newspaper reported (August 2009), under the headline 'Hoofed and

Dangerous: Britain's Killer Cow' how four people had been trampled to death by cows in 2 months (www.independent.co.uk).

Although it is easy to dismiss the problem as an inevitable consequence of working with livestock, there is both a moral and a legal responsibility to minimise the risks of accidents and injury. The Health and Safety at Work etc Act (1974) (Health and Safety Executive, 2013; The National Archives, 2013) and its subsequent regulations define the structure and authority for the encouragement, regulation and enforcement of workplace health, safety and welfare within the UK. The legislation is regularly changed and updated. This paper does not address the legal aspects of health and safety, but there are some essential facts about responsibility:

- The employer is ultimately responsible for the health, safety and welfare of staff during their working hours
- The farmer is responsible for health and safety as veterinary practitioners arrive on farm, but the veterinary surgeon is responsible once she/he starts work, or legal responsibility may be shared
- In 'shared work places' communication is essential to ensure that everyone knows what their job is. Verbal communication is often enough, but where five or more people are working together, there should be a written policy
- DEFRA states that it is the farmer's responsibility to present animals for tuberculosis testing.

Much of the following discussion is based on a workshop session at the British Cattle Veterinary Association (BCVA) Congress (November 2012) led by Andrew Davies and Peter Jinman.

Risk assessment

'People are killed by empty shotguns and quiet bulls' (Paul Roger, personal communication). Risk assessment underpins effective risk management and includes awareness of hazards and understanding of the nature of the risks, which include:

- Physical injuries (for example by horned cattle (Figure 1))
- Chemical accidents
- Zoonotic diseases (Figure 2).

Table 1. Who is at risk?

| | |
|--------------------------|--|
| People on farm | <ul style="list-style-type: none"> ● Keep all unnecessary people away from livestock ● Take note of any special risk requirements of people we work with, for example, hip replacement, hearing aid, poor vision, old or young. Pregnant women are especially at risk |
| Veterinary professionals | <ul style="list-style-type: none"> ● Build up experience with the class of livestock to be handled and ask for advice ● Avoid complacency ● Stress and exhaustion will reduce alertness and ability to focus on risk avoidance ● Pregnant veterinary surgeons may be particularly at risk in some situations |
| Livestock | <p>Stock at special risk include:</p> <ul style="list-style-type: none"> ● Young, sick or lame animals ● Heavily pregnant animals |



Figure 1. Horned cattle present a particular risk to farmers and vets. Handling equipment must be specially designed for them; Figure 2. Cryptosporidiosis is a common cause of disease in veterinary surgeons, students and farm workers as well as in young farm animals.

First there is a need to identify who might be at risk (Table 1) and then to evaluate the level of risk, which includes both the likelihood of accident and its potential severity. Lovett and Mitchell (2008) suggest allocating a score to the risk likelihood and also its potential consequences (1= low chance to 5=high chance), and multiplying the two scores to compare risks. It is

possible to try to lessen or eliminate risks, but IF THE RISK REMAINS LIKELY AND THE POTENTIAL HARM IS GREAT IT SHOULD NOT BE TAKEN — by anyone. This is an obvious truth, but one that is often forgotten amidst the enthusiasm to get a job done. It may be particularly difficult for a young veterinary surgeon or new employee to muster sufficient confidence

- The vet is in a corner and cannot escape if the heifer turns
- The vet is not wearing gloves
- The farmer is against a wall and could bang his head
- The farmer will strain his back if he pulls from this position
- The farmer might get kicked or knocked over
- The heifer has not been restrained. She is in pain and under stress. Although usually a quiet animal she may act unpredictably when calving

Figure 3. Complacency leading to risks. This is one of the author's own animals and although nobody was hurt, the picture shows how many risks are being taken.

Table 2. Hazards and associated risks (see also Phippen, 2008)

| Hazard | | Risks | How to reduce risks | | |
|---------------------|---|---|--|--|---|
| Environment | Light | Dark working conditions increase risk of mistakes with medication, make surgery slower etc | Use a bright, reliable head torch | | |
| | Temperature | Cold conditions increase clumsiness Excess heat can increase fractiousness of both workers and animals | <ul style="list-style-type: none"> Wear gloves (also protect hands and wrists when TB testing) Shelter and shade | | |
| | Slippery under foot | Accidents and falls – both animals and humans Cattle may panic if slipping | <ul style="list-style-type: none"> Boots with non-slip soles Careful positioning of handling facilities Sand and/or straw | | |
| Stock | Temperament – unpredictable or bad-tempered | Injury to humans or animals from trampling, kicks, bites, head butts etc. especially: <ul style="list-style-type: none"> Bulls Freshly-calved cows Animals separated from herd/flock Animals terrified or in pain | <ul style="list-style-type: none"> Use sedation for risky or painful procedures that may cause animals to panic Seek information from farmer about individuals Keep animals together (at least one other) Handle animals quietly Move animals at a slow walk. Act like a stalking predator, so that animals bunch together, not as an attacking predator so that animals panic and charge (Grandin, 2011) Avoid getting kicked by ensuring the animal knows that you are behind it by talking and putting a hand on its rump | | |
| | | | Weight and size | Injury Strains to backs etc. during manual handling | <ul style="list-style-type: none"> Check that handling facilities are adequate, e.g. turnover crate for sheep's feet Restrain animals securely before starting to handle them Use a halter rather than relying on someone to hold on – tie with a quick-release knot in case animal goes down Make sure there is adequate space around any animal that may go down (sedation, euthanasia, casting) and that everyone has a planned escape route |
| | | | Horns | Injury to humans or animals | Always risky <ul style="list-style-type: none"> Check that handling facilities are adequate Use sedation |
| | Zoonotic diseases | Many diseases – carrier animals may not show clinical signs Pregnant women especially at risk (see Lovatt and Mitchell, 2008) | <ul style="list-style-type: none"> Wear adequate waterproof protective clothing and gloves Carry hand disinfectant gel Risks may be unacceptably high for pregnant women (e.g. lambing ewes) | | |
| Handling facilities | Cattle crush, gates and races (Figure 4) | Injuries to operatives as animal struggles: Gates may swing open Lever for closing yoke may crash down Bar behind animal may be dislodged Fingers/hands trapped or pinched Gate not adequately fixed Gate lifts off hinges Injuries to animals: Cuts on sharp broken cladding Broken crush floor Poor design so cattle will not move through facility | <ul style="list-style-type: none"> Check how well the crush works and ask farmer about its idiosyncrasies Keep out of range of the arc of gates Do not put an arm between a metal bar and the animal Do not work behind an animal in the crush with another in the race If it proves difficult or impossible to herd animals through the facility – change it | | |

| | | | |
|-----------|----------------|------------------------------------|---|
| Equipment | Needles | Needle-stick injuries | <ul style="list-style-type: none"> ● Use a sharps bin ● Wash and disinfect affected hand ● 'Note what's in the syringe; if it says go straight to the nearest A and E department then do so' (Phippen, 2008) |
| | Hoof knives | Cuts | <ul style="list-style-type: none"> ● Keep knives very sharp so minimum force required ● Make sure animal is adequately restrained |
| | Scalpel blades | Cuts, e.g. while castrating calves | <ul style="list-style-type: none"> ● Put the scalpel safely out of the way when not in use |
| Drugs | Many | Pregnant women especially at risk | <ul style="list-style-type: none"> ● Make sure animal is adequately restrained ● If an accidental self-injection occurs, take any actions indicated on the bottle |

to refuse to take a risk, so it is up to the employer to provide a framework of support that encourages safe work practices (discussion, BCVA Congress workshop, 2012). The older veterinary surgeon may become complacent and take risks (Figure 3).

Any decisions made about safety in the workplace should be recorded, communicated and implemented. Outcomes of decisions should be reviewed and plans updated in light of problems. Accidents and near-misses should be recorded.

Table 2 provides a grid of common hazards and risks and how they might best be tackled.

This article is not in any way meant to be a comprehensive catalogue of everything that may go wrong, but is a distillate of the authors' experiences. Please also read Phippen's paper (2008) on handling large animals, and Lovatt and Mitchell (2008) on particular risks for the pregnant veterinary surgeon.

Conclusion

The farm animal veterinarian has a particularly risky job, and it will never be possible to prevent all injuries and accidents that occur on farms. However, practical steps can be taken to keep veterinary professionals and others as safe as possible while working. **LS**



Figure 4. Simple system for calving cows. The gate can be swung open if the cow goes down and for C-sections.

KEY POINTS

- Step back and assess risks from a distance.
- Check handling facilities for hazards and stability.
- Take time and avoid complacency. Keep alert and focussed on the job.
- Plan thoroughly.
- Communicate with all personnel. Two-way communication is essential. Reduce background noise so that everyone can be heard
- If something goes wrong, use the diver's approach:
STOP (Second bullets)
THINK
BREATHE
MAKE A PLAN

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