

# Stress-free slaughter of outdoor cattle

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Animals not accustomed to human-animal contact, such as frequently the case in free range beef cattle, can be very challenging to handle at the day of slaughter. Pre-mortal stressors can occur during transport, loading and at the abattoir itself and impact meat quality in a negative way (e.g. DFD-meat). The transfer of the stunning/killing and bleeding procedure from the abattoir to the animals' familiar environment considerably contributes to increase animal welfare.

## The aim

The aim of the project is to scrutinize free-bullet rifle shooting to become a professional and easily controllable on-farm slaughter method for outdoor cattle.



Fig. 1: Outdoor cattle on the pasture

## Legitimate background

On European level, the legitimate situation for free-bullet rifle shooting of cattle is contradictory (regulations [EC] No 1099/2009 and [EC] No 853/2004). In Germany, in 2011, it has become a legal stunning and killing method for outdoor cattle after clearance with the responsible authorities (*TierSchIV 2012* and *Tier-LMHV 1997, amended 2011*).

## Experimental approach

Our pilot project consists of four studies, which are partly ongoing and partly under evaluation. They were mainly conducted on a farm in Northern Germany, keeping 600 outdoor Galloways.

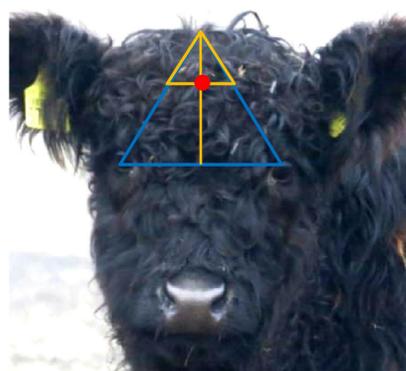


Fig. 2: Optimal aim point for an effective shot

Both of the first studies focus on stun quality assessment. The third and fourth study concentrate on meat quality and behavioural aspects, respectively. Some practice recommendations could already be concluded.

## Recommendations for a proper setting

- Live animal inspection has to be done in time
- The shooting takes place within an enclosed area like a small paddock, which is familiar to the cattle (Fig. 3)
- Separation of single animals has to be avoided
- The shooter is located on a raised hide
- The best aim point for an effective shot is on the forehead (Fig. 2)
- Stun quality has to be controlled immediately (no righting or corneal reflex, no movements of the eyeball, rhythmic breathing or vocalisation) (Fig. 4)
- Bleeding should be done via a chest stick (Fig. 5)
- A hygienically sound car trailer can be used to transport the dead animal to a slaughterhouse for evisceration and further processing (Fig. 6,7)



Fig.3: Reaction of conspecifics



Fig.4: Checking stun quality



Fig.5: Bleeding



Fig.6: Loading



Fig.7: Transportation

## Conclusion

Free-bullet rifle shooting of outdoor cattle is only justifiable in case of high professionalism of all actors involved whereupon most attention has to be paid to the shooter's capabilities.

It might be a solution for completely stress-free slaughter on certain farms that are willing to fulfill all the requirements.