

Response to Flushing Exemption Amend Executive Summary

The Federation of Welsh Farmers Packs' (FWFP) recent call to widen the flushing exemption in the Hunting Act (2004) to allow an unlimited number of dogs has received much media and political attention, primarily due to the paper by Naylor & Knott (2013) claiming to demonstrate the increased effectiveness of using a full pack of dogs. At present only two dogs can be used.

We believe this paper and its results are irrelevant, as the fundamental assumptions underpinning it are seriously flawed – namely: that fox numbers have increased since the Hunting Act came into force; that fox predation has a major impact on farming incomes; and killing foxes helps to reduce fox numbers. These claims have been made repeatedly by pro-hunting organisations, and readily accepted by the media, yet all empirical evidence demonstrates that they simply are not true.

We show below that, contrary to what those in favour of a change to the Hunting Act argue:

- **Fox numbers in the UK are stable**
- **Fox predation does not have a significant impact on farming incomes**
- **Killing does not control fox numbers**

The League Against Cruel Sports believes that wildlife has an intrinsic value, therefore, when a potential conflict between the interests of humans and wildlife arises it is our responsibility to resolve these conflicts using the following tests:

- 1) That there is sound scientific evidence demonstrating a serious conflict and the effectiveness of the suggested solution
- 2) That any intervention can be demonstrated to be the most humane and in the individual animal's interests
- 3) That any solution is sustainable and in the best interest of the natural environment

We believe that the Federation of Welsh Farmers Packs' case for a relaxation of the Hunting Act, including the research put forward to support it, fails at the first test. The call for widening the flushing exemption to allow a full pack of hounds to flush a fox fails on basic logic as, even if this resulted in more foxes killed, it would not reduce fox numbers and might even lead to an increase.

Both the research put forward by the FWFP and the assumptions driving it must therefore be ignored.

Looking at the facts

Fox numbers in the UK are stable

The most recent large scale survey of fox numbers in Britain was conducted by the Mammal Society in 1999-2000. Fox faeces were used to estimate fox numbers in different landscapes across Britain. Using these data, it was estimated that the total rural fox population was 225,000 adult foxes (Webbon *et al*, 2004). Although no similar survey has been conducted since the Hunting Act came into force in 2005, the year-long ban on hunting with dogs imposed during the foot and mouth outbreak (2001-2002) was used to investigate the impact of hunting on fox numbers. After the temporary ban on hunting had been in place, researchers repeated the fox faecal count on a subset of the original sites. This second survey, which was published in the journal *Nature*, **showed no significant change in fox numbers during the one-year hunting ban and in fact, in most regions, the average fox density had declined slightly** (Baker *et al*, 2002). In other words, without hunting, the number of foxes per km² had decreased.

Results from annual monitoring surveys conducted by British conservation organisations confirm that fox numbers have been unaffected by the Hunting Act. The British Trust for Ornithology's

longstanding annual Breeding Bird Survey (BBS), which also records mammal signs across the UK, shows that fox numbers declined between 1995 and 2004 but have been stable from 2004 to 2012 (Wright *et al*, 2013). The authors concluded: **“Our data provides no evidence that fox numbers have increased since the ban but with the possibility that the fox population trajectory is now more stable following the ban.”** This view is echoed by the Peoples’ Trust for Endangered Species’ most recent Living with Mammals Survey which states: *“The proportion of sites recording foxes has stayed more or less the same over the ten years of the survey, going against claims in the media that we are increasingly overrun by foxes”* (PTES, 2012). Their Mammals on Roads survey, which records the number of mammals seen dead on the road, also showed no change in fox numbers between 2005 and 2011 (PTES, 2013).

Fox predation does not have a significant impact on farming incomes

While we do not dispute that foxes take lambs, empirical evidence demonstrates that fox predation accounts for only a very small proportion of lamb losses and has a negligible financial impact.

Estimates of annual UK lamb losses range from 7-15% (Binns *et al*, 2002; Defra, 2004). However, studies suggest that predators and misadventure (e.g. going missing) account for only 5% of these losses, with the actual proportion of these lost to foxes being very difficult to determine and likely to be overestimated (Macdonald *et al*, 1997). According to Defra (2004), the main causes of lamb loss are: abortion and stillbirth; exposure and starvation; infectious disease and congenital defects. In other words, 95% of lamb losses are due to farm husbandry practices.

Defra’s advice to farmers is very clear and focuses entirely on improving farming practices: *“Many lambs could survive with better planning, good preparation, well organised lambing routines and facilities, good stockmanship, possibly increased supervision and staffing numbers around lambing time and early recognition of problem lambs.”* Their main recommendations for reducing lamb mortality are:

- common sense quarantine rules as part of a farm biosecurity policy to reduce disease spread within and between flocks
- attention to ewe condition, feeding and management to maintain milk supply
- close supervision of lambs, particularly for the first few days, and early treatment of problems
- ensuring adequate shelter from the wind (straw bales if no hedges)

This advice echoes results from a 2002 study into UK lamb mortality which found that large flocks, poor ewe condition and high ewe-replacement rates were the major causes of lamb mortality (Binns *et al*, 2002). The authors concluded that farmers could increase lamb survival by improving the conditions of ewes at breeding, maintaining good hygiene at lambing and supervising young lambs.

Establishing whether a lamb has been killed by a fox, or died as a result of the sudden onset of bad weather or mis-mothering and been subsequently scavenged by a fox, is very difficult. Thus foxes may be blamed for killing a lamb when in fact they have simply found it dead or dying (Natural England, 2011). This was demonstrated in a study on two Scottish hill farms where the level of lamb losses that could be confidently attributed to fox predation was 0.6% at farm 1 and 0.2% at farm 2 (White *et al*, 2000). Based on market values at the time, the authors calculated that this equated to a revenue loss in any one year of £298 at farm 1 and £112 at farm 2. They also pointed out that these values are greater than the actual loss of profit farms would experience as they exclude the costs of raising the lambs to slaughter weight. They concluded: *“Fox predation is not a significant cause of lamb mortality on hill farms and the overall financial impact of fox predation on lamb production is likely to be small.”*

Even studies based on farmers’ self-reporting the number of animals taken by foxes, and thus likely to be overestimates, demonstrate that financial impacts of predation are low and killing foxes is not the solution and might even make matters worse. In a study of UK sheep farms, 7.8% of lost lambs were reportedly killed by foxes. However, **predation was more likely to have occurred if farms had carried out fox control** and on farms with larger flocks, while farms were less likely to have experienced fox predation if all ewes were lambed indoors. The authors calculated that housing all ewes indoors would cost on average £0.15 per ewe and this was lower than the costs of additional fox control (Moberly *et al*, 2004a). In a separate study where similar data were obtained from free-range

poultry farmers, mortality due to fox predation was reported as less than 2%. **Again, fox predation was greater on farms where lethal fox control occurred.** It was also greater on farms where the numbers of birds dying from other causes was also high, suggesting factors relating to the overall care of the birds. The authors concluded that changes in farm management would be the most cost-effective means of reducing fox predation (Moberly *et al*, 2004b).

Advice from Natural England (2011) to livestock farmers concerned about fox predation echoes the results of these studies: *“Protection of livestock and control of damage is preferable to fox destruction. Investment in adequate poultry housing is preferable to a continual commitment to killing foxes. Also, there is no substitute for good husbandry to ensure that livestock are healthy and able to withstand the sudden onset of bad weather that may result in stock deaths for which foxes are blamed.”*

Animals on hill farms are exposed to particularly harsh conditions, making ewe condition and good shepherding especially important in minimising lamb losses. Lambs can lose body heat very quickly and unless they are well fed they can, particularly in cold, wet and windy conditions, become hypothermic. Hypothermic lambs are lethargic and tend not to follow the ewe readily (Defra, 2004). These individuals would be highly vulnerable to fox predation, but would also be highly likely to die from exposure in the absence of predation, thus lending further uncertainty to the true impact of fox predation. It is extremely difficult to demonstrate whether fox predation has a compensatory or additive effect overall with regard to other mortality (Greentree *et al*, 2000). Nonetheless, government subsidies to upland sheep farmers more than compensate for lamb losses, whether through predation or otherwise. **In 2010, the average subsidy to Welsh hill farms was £53,000** (Institute of Biological, Environmental and Rural Sciences, 2011).

Killing does not control fox numbers

Empirical research does not support calls for greater fox control, demonstrating that it does not reduce overall fox numbers and may actually lead to an increase in numbers and/or predation.

A pre-Hunting Act study investigating the effect of over-winter culling in Welsh forests (including fox drives, mounted hunts and killing by rangers) found that **high culling pressure led to increased fox numbers** (Baker & Harris, 2006). Comparing fox faecal counts before the culling season began (autumn) and when it ended (spring) showed that spring faecal densities were positively correlated with the number of foxes killed. In other words, spring fox numbers were highest where the culling pressure had been highest. This is probably because more foxes moved in to contest the vacant area than were there in the first place (Harris, 2013). The authors concluded that, *“culling undertaken by fox control societies, mounted hunts and rangers appeared to have no utilitarian value with respect to reducing fox numbers.”*

A modelling study investigating the effects of fox control at the landscape scale produced nearly identical results to those observed in the field (Rushton *et al*, 2006). Computer models of population size under four methods of control (fertility control, culling at the den, winter-shooting and hunting with hounds) were compared to a model with no control. Mean total population size under control was similar to no control for all methods except winter-shooting which was considerably lower. However, successful dispersal was highest in the winter-shooting method, meaning that the territories left vacant by shot foxes were quickly filled by incoming foxes. The authors concluded that the culling methods modelled were not very effective at suppressing populations of foxes largely because of immigration from surrounding populations.

Further studies combining field observations and computer models have shown that **when fox territories become vacant, they are taken over by new foxes very rapidly, generally within 3 to 4 days** (Giuggioli *et al*, 2007; Potts *et al*, 2013). The fact that hunting takes place during the main fox dispersal period (when juveniles leave their natal territory and try to establish their own) makes it a particularly poor form of population control as it is making room for new individuals precisely when they are seeking it. So lethal control may alter the demographics of fox populations, resulting in a high turnover of young individuals rather than an established population of longer-lived animals, but the population size remains the same (Natural England, 2011).

While doing nothing to limit fox numbers or predation, the perturbation of populations and amplified patterns of movement caused by culling are known to exacerbate the transmission of disease

(Donnelly *et al*, 2003). Immigrating individuals may also exert higher levels of predation relative to resident individuals as incomers may have to survive on highly visible livestock while they learn where to find food in their new habitat (Frank & Woodroffe, 2001). As highlighted above, studies on lamb and poultry predation (Moberley *et al*, 2004a,b) have found a strong positive correlation between high levels of fox control and increased predation by foxes. The high turnover of individuals caused by culling pressure may explain this pattern. In other words, culling may actually be detrimental to farming interests. Defra (2005) seems to acknowledge this in their advice to farmers on dealing with foxes, stating: *“Before any action is taken, a thorough assessment of the problem should be undertaken and the consequences of any action carefully thought through. It is clearly pointless to spend money on livestock protection, or fox control, if the cost is likely to be more than that of the damage it is designed to prevent.”*

Conclusion

The call from the FWFP to widen the exemption to allow a full pack of dogs to flush foxes fundamentally fails when the underlying logic is examined. If the aim is to reduce foxes in an area, then the theory that you need to kill more foxes does not stand up to the results of field research and practice, and is highly likely to do the reverse – increase the fox population.

The need to shoot more foxes due to an alleged increase in fox populations since the Hunting Act (2004) came into effect is not proven, and all evidence contradicts that likelihood. The financial impact of fox predation on lambs is not deemed significant as proven by several studies, and especially in the context of the average level of subsidy a Welsh Hill farm receives from the Government.

The League Against Cruel Sports states that this call to change an exemption of the Hunting Act (2004) is so far removed from the reality of what it purports to achieve that it can not be taken seriously, and examination of the facts supports that.

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