

Northern Ireland Squirrel Forum Standard Operating Procedure:
Squirrel feeding station / trap hygiene

Disease impacts are the most acute threat to the red squirrel population. We must ensure that in our actions to help conserve the red squirrel we do inadvertently aid the spread of disease.

The **squirrel pox virus**, sometimes erroneously referred to as squirrel parapox, is responsible for the disease known as squirrel pox which presents in red squirrels with a mange, scab or myxomatosis-like symptoms, leading to rapid loss of body condition and subsequently death. The virus appears to be endemic amongst the UK grey squirrel population and its effects, if any, on this species are unclear. Nearly all grey squirrels with pox antibodies do not display any outward symptoms.

Pox-type viruses are fairly resilient and will survive outside the host for a considerable time if the conditions are favourable. Dry weather may mean the virus remains viable for over a month. Wet conditions will reduce its viable period considerably. Outside the host animal the virus can be killed by good hygiene procedures using suitable anti-viral veterinary disinfectants.

Another significant threat to the red squirrel is the **Adenovirus**. One of the key diagnostic symptoms of the disease is the presence of diarrhoea on the fur of the squirrel around the anal area. However, this is not always visible in squirrels which are infected by an adenovirus. The movement of the squirrel will also appear increasingly sluggish. The animal will lose weight and condition, quickly dying from dehydration and the secondary effects of diarrhoea. Adenoviruses in general are unusually resistant to chemical or physical agents and are stable over a range of pH conditions. This can allow for prolonged survival outside of the body. Adenoviruses are primarily spread via respiratory droplets; however they can also be spread by faecal routes as well. Outside the host animal the virus can be killed by good hygiene procedures using suitable anti-viral veterinary disinfectants.

There are a wide range of other pathogens that affect red squirrels, as well as other wildlife, that they may come into contact with. Feeders will attract birds and mammals to feed on spilt food, and traps will regularly capture non-target species, therefore, the risk of disease transmission is high. By following these guidelines, you should help reduce these infections.

Feeders and feeding stations.

Good feeding station hygiene should be observed at all times, especially in areas where red and grey squirrels are in close contact. This reduces the risk of disease transmission, particularly squirrel pox.

Although there is no evidence that squirrel pox is a zoonosis, NISF recommends that you should always wear good quality waterproof nitrile gloves to protect your hands when working on or around squirrel feeders.

Feeder hygiene

- Empty any uneaten spoilt food.
- The feeder should be scrubbed with a mild solution of detergent and water to remove greasy residues.
- Rinse with clean water.
- The feeder should be liberally sprayed with a fresh solution of a DARD/DEFRA approved veterinary disinfectant such as Trigene Advanced, Virkon S or F10 SC.
- **Always follow the label information when using any chemicals.**
- <http://www.dardni.gov.uk/approved-disinfectants-march-2010.pdf>
- http://disinfectants.defra.gov.uk/Default.aspx?Location=None&module=ApprovalsList_Sl
- A COSSH risk assessment is applicable for professional operators and for those managing volunteers. <http://www.coshh-essentials.org.uk/>
- Remove disinfectant with clean water.
- Use detergents and disinfectants with little or no perfumes and avoid those chemicals that use Ammonia as the active ingredient. Ammonia can mimic urine scent marks which may lead to behavioural changes in animals.
- The disinfectant solution can be mixed and sprayed using a clean herbicide hand pumped sprayer. *(It is strongly advisable to buy a new sprayer for this purpose only).*
- Check that the chemicals can be safely used around mammals.
- Dry the inside of the feeder before refilling.
- Moving the feeders around the site every month or so using two or three regular locations will help reduce infection rates.

Most disinfectants are relatively stable in their original containers at full concentration. Once they are diluted they become less stable reducing their effectiveness, therefore only ever mix up as much solution as you require for that day.

Approved agricultural/veterinary disinfectants: ensure that those chemicals kill viruses to protect against squirrel pox.

Traps

Were traps being used as part of a grey squirrel management programme a similar hygiene regime must be enforced. When any animal has been captured in a trap there will certainly be traces of saliva, blood, urine or faeces. There are a range of pathogens that can be transmitted by contact with these substances. Cleaning reduces the risk of disease transmission between animals and between animals and humans. Were resources permit, use two or more traps per zone, remove one trap from the site for cleaning

and replace with a second trap. Were the traps have been exposed to mink or stoats, even after the basic hygiene regime, the trap may have to rest for a couple of trapping cycles to allow the scent to dissipate or trapping rates may be reduced.

Trap hygiene

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- Rinse with clean water.
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- **Always follow the label information when using any chemicals.**
- <http://www.dardni.gov.uk/approved-disinfectants-march-2010.pdf>
- http://disinfectants.defra.gov.uk/Default.aspx?Location=None&module=ApprovalsList_SI
- A COSSH risk assessment is applicable for professional operators and for those managing volunteers. See Appendix 1 which is a basic risk guidance for using Sodium Hypochlorite.
- <http://www.coshh-essentials.org.uk/>
- Remove disinfectant with clean water.
- Use detergents and disinfectants with little or no perfumes and avoid those chemicals that use Ammonia as the active ingredient. Ammonia can mimic urine scent marks which may lead to behavioural changes in animals.
- The disinfectant solution can be mixed and sprayed using a clean herbicide hand pumped sprayer. (*It is strongly advisable to buy a new sprayer for this purpose only*).
- Always read and follow the label.

Move traps around to avoid setting traps on soiled surfaces. Maintain trap mechanisms as per manufacturer's instructions, (fresh applications of oils or lubricants may reduce trap efficiency until associated odours fade.

Sacks

If sacks are used to dispatch squirrels removed from traps it is strongly recommended that they be replaced on a regular basis as they may become heavily soiled, this reduces the possibility of leakage and contamination of soils surrounding the kill zone. Alternatively soiled sacks can be drenched in soapy water and hand washed (wearing gloves) rinsed and then soaked in weak bleach solution or disinfectant solution and rinsed as above (please note: the use of disinfectants or bleaches may reduce the expected lifespan of the Hessian sack due to the chemical attacking the fibres).