**Squirrel feeding station / trap hygiene**

The squirrelpox virus 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 then death. There is no practical treatment for sick squirrels; the reds tend to die within 10-14 days. The virus appears to be endemic amongst the UK grey squirrel population and its effects on this species appear unclear. Nearly all grey squirrels with pox antibodies do not display any outward symptoms.

The virus appears to be spread via a number of routes, with ectoparasites being a primarily pathway, however, live virus is found in faeces, urine and saliva. Pox viruses are fairly robust 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 the virus can be killed by good hygiene procedures using disinfectants and bleaches which may help reduce its spread within the local population.

There are a wide range of other pathogens that affect red squirrels, and the other wildlife that they may come into contact with. Feeders will attract other mammals and birds 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. (During confirmed squirrelpox outbreaks, feeding stations should be closed down, squirrels can be scatter fed).

**Feeders and feeding stations.**

Good feeding station hygiene should be observed at all times. The regularity of the cleaning regime will be determined by, feeder construction, usage, soiling, weather and threat of pox. Where there are both red and grey squirrels in close contact, this schedule should be at least fortnightly. Not only does this reduce the risk of squirrelpox transmission but it reduces the risk of other diseases and vectors coming into contact with red squirrels.

Although there is no evidence that squirrelpox can be transmitted to humans, a number of other pathogens carried by squirrels may do so, always wear good quality waterproof nitrile gloves to protect your hands when working on or around squirrel feeders. Wash your hands well on completion of the task or before eating, drinking or smoking.

* + **Empty any uneaten spoilt food**
  + **The feeder should be scrubbed with a mild solution of detergent and water to remove greasy residues.**
  + **Use detergents with little or no perfumes. Then rinse with clean water.**
  + **The feeder should be liberally sprayed with, or dipped in fresh 5-10% solution of Sodium hypochlorite (the primary agent in bleach) or similar approved veterinary disinfectant for 10-15 minutes.**
  + **Rinse with clean water and allow to dry well before use.**
  + **Have enough feeders to allow units to be rested following cleaning.**
  + **Moving the feeders around the site every month or so using two or three regular locations will help reduce infection rates.**

**Sodium hypochlorite**

Sodium hypochlorite is a potentially dangerous and corrosive substance. While working with sodium hypochlorite, safety measures must be taken to protect workers and the environment – work in a well ventilated space, wear nitrile gloves and eye protection especially during solution preparation. Sodium hypochlorite is a clear, slightly yellowish solution with a characteristic odour. As a bleaching agent for domestic use it usually contains 5% sodium hypochlorite with a pH of around 11, it is irritant. If it is more concentrated, for example 10-15% sodium hypochlorite with a pH of around 13; it burns skin and is corrosive. The liquid is harmful if swallowed or in contact with the skin. The fumes are harmful if inhaled.

If an acid is added to sodium hypochlorite solution, chlorine gas (poisonous!) is released.

The 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 – re-using equipment previously used for other chemicals may lead to a release of Chlorine gas which is poisonous to humans*).

Most disinfectant solutions are unstable, gradually decomposing. Only mix up what you need as the remainder will be wasted. Never mix different chemicals without ‘on label’ approval.

**Branded disinfectants**

Many other veterinary or agricultural general disinfectants should be equally effective against squirrel pox virus and other pathogens. Although these may be more expensive per litre, they can have other advantages such as being easier to store. Always read the label and follow any safety advice. Check that they can be safely used around mammals.

**Approved agricultural disinfectants**:

<https://www.daera-ni.gov.uk/publications/approved-disinfectants>

<https://www.gov.uk/guidance/defra-approved-disinfectant-when-and-how-to-use-it>

Use bleaches or disinfectants with little or no perfumes and avoid those chemicals that use Ammonia as the active ingredient as this chemical can mimic urine scent marks which may lead to behavioural changes in animals.

**Health and safety**

* + **With all disinfectants; always read the label and follow specific user instructions**.
  + **Never make up more than you need**.
  + When handling substances, especially concentrates (if unavoidable), always wear the recommended protective clothing, eg rubber gloves, goggles or visors, and ensure an eyewash bottle is available.
  + Never mix different cleaning chemicals.
  + When diluting always add the concentrated liquid to water, not the water to the concentrate.
  + If cleaning chemicals are accidentally splashed onto your skin or eyes, always wash away with plenty of water. Seek medical advice if irritation persists.
  + Avoid lifting and pouring from heavy or awkward bulk containers, minimise handling by use of pump siphons, pumps etc.
  + If you are dispensing powders/pellets, always use a scoop; never use your hand.
  + Never transfer cleaning chemicals into food or drink containers as they can be mistaken for foodstuffs. Ensure spray bottles are other containers are clearly marked with their contents.
  + Only use cleaning chemicals in well-ventilated areas.
  + Always clean up any spills on floors or work surfaces immediately.
  + Risk assessments and COSHH assessments are required for professional users and directed volunteers. <http://www.hse.gov.uk/coshh/basics.htm>.
  + Dispose of waste chemicals safely and legally.

**Traps**

Equally were there are traps being used as part of the 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 and faeces. There are a range of pathogens that are transmitted by contact with these substances. Cleaning reduces the risk of disease transmission between animals and between animals and humans.

Always wear good quality waterproof gloves to protect your hands. Cages should be scrubbed with a mild detergent solution and rinsed to remove any organic material before being liberally sprayed or dipped in a 5-10% solution of Sodium hypochlorite or other approved veterinary disinfectant, always follow the label.

***Warning!!!***

Remember most disinfectants are potentially dangerous and corrosive substances. Safety measures have to be taken to protect workers and the environment – see above.

* Use bleaches or disinfectants with little or no perfumes and avoid those chemicals that use Ammonia as the active ingredient as this chemical can mimic urine scent marks which may lead to behavioural changes in animals. The bleach 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 – re-using equipment previously used for other chemicals may lead to a release of Chlorine gas which is poisonous to humans*).
* There appears to be a distinct trap avoidance of freshly cleaned traps. It is therefore pertinent to have three traps per station, one set in the field, one resting following cleaning and a rested clean trap to replace any soiled trap.
* Rinse the traps with plenty of fresh clean water.
* 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) organic oils may reduce this impact.
* . Wash your hands well on completion of the task or before eating, drinking or smoking.

**Sacks**

Where squirrels are taken from the traps and placed into Hessian sacks for dispatch it is strongly recommended to have a number of sacks available to allow them to be replaced once they become heavily soiled. This reduces the leakage and possible contamination of soils surrounding the kill zone. Soiled sacks should be emptied, drenched in hot soapy water and hand washed (while using gloves) rinsed and then soaked in weak bleach solution, rinsed as above (please note: the use of bleach may reduce the expected lifespan of the Hessian sack due to the chemical attacking the fibres) and thoroughly dried.