

Sheep Keds



- *Melophagus ovinus* is a flat, brown **wingless fly**.
- It is a **pest** of domestic and mountain sheep and goats.
- Introduction to a flock is often through the purchase of an infested animal.
- Keds are more commonly seen in the **winter** and in wet conditions, because they are sensitive to hot, dry weather.



Photo: 'Acarologiste' 2016 on Wiki Commons

- **Keds feed on blood**, taking 1 meal/day, which lasts 5–10 minutes.
- They can transmit other diseases such as bluetongue virus.
- Females produce a single egg that hatches in the uterus. She gives birth to a larvae, which pupates within a few hours, attaching to the wool. Pupae typically hatch in 2–5 weeks.

- Female keds live for 4–5 months and may lay 1 larvae per week, so build-up and infection is slow.
- Male keds only live 2–3 months.
- **Keds are spread by direct contact.** In the environment, keds typically only survive 3–4 days, but in mild, moist conditions, up to 2 weeks.
- The prevalence of keds increases in ewes during pregnancy. **Ewes spread keds to their lambs shortly after birth.**
- Keds may be seen more often in sheep in poor condition and in organic production.

- Keds are **irritating**, causing pruritus. Infested animals will **rub** against fences and gates, **biting** their wool. These actions damage the wool and skin. Ewes may roll on their back to scratch an itch, and then die from secondary bloat if they can't right themselves.
- The feces from the keds may stain the wool and give it a musty smell.
- **Skin blemishes** (cockle) may appear due to an allergic reaction to salivary secretions from the keds. These blemishes are small scattered, dense, brownish nodules in the grain layer of the skin, which damage the leather value of the skin.
- **Severe infestations** may cause weight loss and anemia.



Photo courtesy of NADIS

How Are Sheep Keds Diagnosed?

- Part the wool to see the sheep keds. They are easy to see with the naked eye.
- The adult ked is **1/4" in length**, and **leathery**, with a **reddish brown** color. It is **hairy**, and dorso-ventrally flattened, with **6 strong legs** but no wings or claws.
- Keds typically infest the neck, breast, shoulders, belly, and thighs.



Treatment For Sheep Keds Is Best After Shearing

- The best time to treat sheep with an insecticide is in the spring, after shearing, when the wool is short and shearing cuts have healed.
- Shearing removes many keds (~75%) and helps in absorption and distribution of topically applied insecticides.
- When conditions allow, shearing in late pregnancy will reduce the spread of keds to newborn lambs.
- Follow insecticide label directions, meat withdrawal periods, and directions for use of personal protective equipment (PPE).

Trade Name	Insecticide	Route	Dose	Frequency	Comments
Boss Pour-On	permethrin	Pour-on	1.5 ml per 50 kg b.W	Repeat in 2 weeks	<ul style="list-style-type: none"> • Do not treat more than 2x/year • Meat withdrawal period = 2 days
CyLence Pour-On Insecticide	cyfluthrin	Pour-on	2 ml per 10 kg b.W.	Once	<ul style="list-style-type: none"> • Part the wool and pour along the spine, close to the skin • Do not treat more than 1x/year • Meat withdrawal period = 1 day
Doktor Doom Long Lasting Residual Surface Insect Killer	permethrin	Spray	Spray 3 seconds each side	Spray back, withers, forelegs	<ul style="list-style-type: none"> • Need good spray pressure (200 to 350 lb/square inch)
Ectiban 25 Fly Killer	permethrin	Spray	200 ml per 50 liters water	Maximum of 150 ml per animal	<ul style="list-style-type: none"> • Only treat 1x/year • Meat withdrawal period = 90 days
InCide 25 Killer	permethrin	Spray	200 ml per 50 liters water	Maximum of 150 ml per sheep	<ul style="list-style-type: none"> • Meat withdrawal period = 90 days

How Can Sheep Keds Be Controlled?

Quarantine new arrivals, inspect for keds and treat if observed, before mixing with the flock.

After shearing, treat with an appropriate insecticide.

Eradication is possible if the entire flock is treated at once.



Photos from the Feedlot Lamb Pathology Atlas, <https://ablamb.ca/images/documents/resources/health/Feedlot-Lamb-Pathology-Atlas-Final-for-Print.pdf> and courtesy of Drs. Paula Menzies and Joyce Van Donkersgoed.

