

Section:
4-H Ontario Livestock Project
Subject:
Animal Health & Safety Best Practices



## Healthy Calves for 4-H Calf Club Projects and Ontario Calf Shows

*Information compiled by the Ontario Association of Bovine Practitioners Calf Health Team including: Dr's Tim Henshaw (Eastgen), Christie Morrow (Heartland Veterinary Services), Rex Crawford (Dufferin Veterinary Services) and Ann Godkin (OMAFRA Veterinary Science and Policy).*

**Introduction:**

4-H calf club and calf show participants, by exhibiting ONLY calves that are free of visible signs of infection and disease, ensure that they:

- Keep calves, the future herd replacements, healthy.
- Keep source herds healthy.
- Keep people handling calves healthy and
- Present a positive image of their breed, club, organization and commodity.

Young cattle are susceptible to infectious contagious diseases. When calves and heifers are infected they may display signs of illness and compromised health. Visibly or invisibly infected calves and heifers can spread infections among themselves when mixed together at shows, club events or during transport. Infected calves bring infections onto Ontario farms when they return home from shows or calf club events.

Calves used for 4-H club projects, achievement days, clinics or exhibited in calf shows are at greater risk of becoming infected because of transport, changes to housing and feeding and mixing with other calves. Most remain healthy indicating that it is possible to work with and care for calves in a manner that keeps them free of infection.

Calf club Leaders, show representatives and veterinarians can foster improved calf health by educating 4-H and calf club participants about common calf-hood infections. By providing basic education and training for participants, the adoption of management practices that prevent infection spread among the calves, can become the 4-H calf club standard.

Common infections among calves and their visible signs are:

Body System Infected	Example	Visible Signs
Skin	Ringworm Warts Lice	Circular lesions with scabs or hair loss Raised hairless bumps Visible lice on skin, evidence of calves rubbing skin in response to itchiness
Respiratory	Pneumonia	Coughing, discharge from eyes or nose (white or clear) Rapid rate of breathing Fever
Gastrointestinal	Diarrhea	Watery manure Fever

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**Best Practice Recommendations to Ensure Healthy Calves for 4-H Clubs**

1. Select a healthy calf initially.
2. Have a veterinarian inspect the calf early in the season. Follow veterinary recommendations regarding treatments and preventive health practices.
3. Vaccinate the calf according to the veterinarian’s recommendations and in a manner compatible with the program in place in the calf’s herd of origin.
4. Complete the vaccination record. The record should contain: the date of vaccination, the vaccines given (name, type and lot number), location where the vaccination was given, the route of vaccination (IM = intramuscular, SQ = subcutaneous or IN = intranasal) and the name of the person that gave the vaccination.
5. Treat calves for external (lice) and internal parasites as recommended by the herd veterinarian.
6. If the calf shows signs of illness consult the veterinarian prior to treatment.
7. Follow recommended biosecurity protocols when handling, housing, clipping, grooming and feeding calves that appropriately protect them from infection.

**Biosecurity best practice recommendations to prevent infection and disease spread among calves:**

**Shared Equipment** creates a significant risk of transmitting diseases from one calf to another. When you are at a show, you should always assume that calves from other farms have a contagious disease. The following are examples of disease-transmitting equipment that should not be shared among cattle from different farms. If you detect ringworm at home, the same concepts should be applied to your club calf to prevent it from becoming infected or affected with visible signs.

1. **Water and feed buckets** – can easily transmit diseases that pass through nasal or oral discharges (mucous, saliva). Water buckets should be filled directly from a tap and not dipped out of a bigger trough. Cattle from the same farm can share water buckets safely.
2. **Halters** can easily spread ringworm and warts from one calf to another and both diseases can be contagious before visible signs are seen in the source calf. Ringworm spores can remain infective for long periods of time. Dilute bleach (1 part bleach: 3 parts water) or a suitable disinfectant (i.e. Virkon) can be used to remove ringworm from halters when they must be shared (show halters). Each calf should have their own tying halter.
3. **Brushes, combs and clippers** can easily transmit ringworm and warts between calves. Only share brushes among cattle from the same farm. If any calves have signs of ringworm at home they should be put in a separate pen and have equipment that is kept separate and only used on them. Clippers can be wiped down between calves, and blades disinfected between calves. If a fitter encounters any signs of ringworm when clipping, clippers and clipper blades should be thoroughly disinfected before clipping another calf.
4. **Direct contact with other calves** (touching) is a low risk way of transmitting skin disease at shows, but any calves that are suspected of being actively infected should be kept away from other calves until a veterinarian or show organizers can decide if the calf is allowed to participate in the show.

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## Skin Infections of Particular Concern to 4-H Calves: Ringworm, Warts and Lice

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Calves are susceptible to becoming infected and showing visible signs of ringworm and warts, or infested with lice. The two skin infections and the skin parasite may be more common among calves that undergo handling, movement and mixing associated with their involvement in calf club projects. 4-H participants and Leaders need to be well informed about these diseases and infestations.

### Ringworm

**Cause:** Fungus that invades hair, hair follicles and the surrounding skin. Produces spores.

**Spread:** Highly contagious - can spread calf to calf

**Zoonotic:** Meaning it can spread to humans

- Spreads by direct contact or indirectly by carriage on equipment such as clippers, brushes, halters, etc.
- Irritated skin caused by halter or rope rubbing, manger edge rubbing, excessive washing or strong soaps, clipping or grooming, may be more susceptible to infection
- More prevalent when overcrowding, inadequate nutrition or other concurrent health problems (such as pneumonia) occur
- Spore and fungus survival and spread more likely in a warm, moist (humid) environment such as overcrowded calf pens and pens with moist bedding.
- Survival is reduced with increased air movement (drying) and sunlight
- Recovery can take up to 4 months

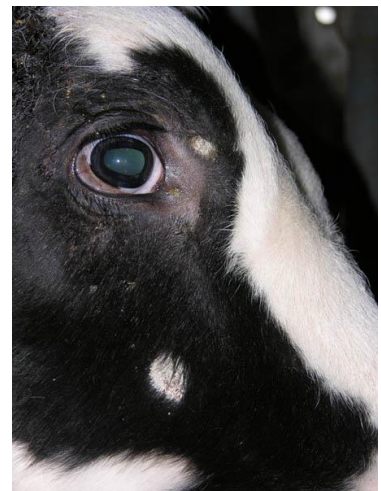
**Impact:** Visibly unappealing, can permanently scar skin and hides, associated with reduced growth rates

### **How to recognize:**

- Skin lesions
- Patches of hair loss with white/grey scabs in a circle
- White skin areas may show pink rings before hair loss
- Can be one patch or several; usually on head or neck but can be anywhere



Calf with multiple ringworm lesions on head



Calf with ringworm lesions on head

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### WARTS

**Cause:** Viral infection, a papilloma virus (BPV 1)

**Spread:** Highly contagious – can spread calf to calf

- Not contagious to humans
- BPV-1 can infect horses and lead to the development of benign tumors known as sarcoids
- Virus spreads by direct contact or indirectly by carriage on objects (e.g. grooming tools) and possibly insects
- Virus enters the skin via tiny skin abrasions
- Virus multiplies only in skin cells. Survives a long time in the environment
- Warts appear up to 2 months after exposure
- As warts can continue to appear over months calves need to be carefully examined frequently to identify new warts

#### **How to recognize**

- Typically found on the head, neck and shoulders of calves
- May appear as a simple raised hairless bump, or “cauliflower-like”, or pedunculated (above the skin on a short stalk)
- Can be single or multiple

**Impact:** visible indication of infection

### LICE

**Cause:** infestation with a wingless, flattened insect - Different type, one type feeds off blood

**Spread:** by direct contact and contaminated objects

#### **How to recognize**

- Causes irritation of the skin , hair loss
- Itchy - calves bite, scratch and rub at themselves
- Unthrifty general appearance

**Impact:** Anemia, lower production, Irritating to the calf, Unthrifty appearance



*Warts around a calf's eye*



*Warts on the tail head of a calf – an unusual location*



*Sucking louse*



*Lice on the skin of a calf*

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**Note:** This document is provided as a tool for show/event organizers. 4-H Ontario encourages the use of best practices in regards to animal health. It is the responsibility of the show/event organizers to set their expectations and communicate that information with participants of that show; for example rules and guidelines regarding animal health.

### **Best Practices for Leaders, Participants and Veterinarians Judging the acceptability of calves for shows**

Information compiled by the Ontario Association of Bovine Practitioners Calf Health Team including: Dr's Tim Henshaw (Eastgen), Christie Morrow (Heartland Veterinary Services), Rex Crawford (Dufferin Veterinary Services) and Ann Godkin (OMAFRA Veterinary Science and Policy).

**Participants should bring only healthy calves to a show. The best practice recommendations below provide a standard interpretation of what is considered acceptable and what is not.**

Skin lesions are visible indicators of infection. The presence of skin lesions in show calves will impact on acceptance to shows. Contact a veterinarian to identify and treat skin problems and infections well in advance of show.

#### **1. No calves with visible warts will be accepted at the show**

Why aren't calves with any warts allowed in shows? Visible warts are aesthetically unpleasing. The virus that causes warts is contagious to other cattle.

##### **Rationale:**

- Warts can easily be removed by a veterinarian and removal sites heal quickly
- Participants and calf owners are responsible for inspecting calves frequently to identify warts on calves as soon as possible.
- Participants and calf owners are responsible for seeking veterinary advice or assistance to remove warts at least 3 weeks prior to show dates
- Therefore, calves with any visible warts will not be allowed on the show grounds.

#### **2. Some calves may be accepted in spite of having had ringworm.**

Why aren't calves with ringworm allowed in shows? Visible ringworm is aesthetically unpleasing. Active ringworm is contagious to other cattle and to people. Why are some calves accepted and others not allowed in shows?

##### **Rationale:**

- Ringworm, even with effective treatment, takes a long time to completely heal. Healed ringworm may leave visible lesions or changes to the hair coat or underlying skin for months even though active infection has ended.
- Information regarding treatments given or tests done on calves (scrapings, cultures etc) will not impact on the decision regarding acceptable vs. unacceptable. Visible lesions on calves are aesthetically unappealing and regardless of other information may prevent the calf from being admitted to shows.

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**Calves will be accepted if all of the following are true:**

- Lesions are less than 2.5 cm in diameter.
- All lesions are completely hair covered.
- Discoloration of hair or skin under hair may be present.

**Calves will NOT be accepted if any of the following are true:**

- Any lesion is greater than 2.5 cm in diameter.
- Any part of the lesion is not completely hair covered.

**Ringworm: Examples of Acceptable and Unacceptable Skin Lesions on Calves**

**Acceptable because:**

- Healed
- Hair covered



**NOT Acceptable because:**

- Clearly visible
- No hair cover
- Crusty, scabby cover
- More than one lesion
- One lesion is large (greater than 2.5 cm)

