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Construction and Operation of a Sheep Footbath



Introduction

Footrot is a common, debilitating condition of sheep that can affect a large percentage of a flock. When treatment of the complete flock is recommended, it is convenient to use a footbath. This pamphlet describes the construction and operation of such a footbath and is intended to accompany the pamphlet titled "**Footrot in Sheep.**"

Considerations When Constructing a Footbath

The purpose of the footbath is to allow the treatment solution to stay in contact with the hoof for the amount of time necessary to kill the bacteria, without in turn causing damage to the hoof.

Animals with overgrown or under-run hooves will not benefit from this treatment so trimming should be performed in advance. Dirt should also be removed from hooves to permit the solution to penetrate into the damaged tissues.

Construction of a Footbath

The footbath should be in an area, such as a hallway, where animal movement can be controlled. Sheep should be lead into the footbath and penned in for the period necessary. This could involve gates at both ends of the bath or other such control methods.

The bath itself should be impervious to liquids and filled up to 5-6 cm. The total wall height should be at least 50 cm. The floor of the bath should be non-slip. Some people put a thin layer of discarded wool into the footbath to provide better footing and to reduce splashing.

The construction materials would depend on availability and whether the bath is intended to be permanent or not. Plywood, concrete, galvanized metal and plastics are all acceptable providing that joints are sealed or caulked. Galvanized metal is a poor choice for use with a copper sulphate solution as it will corrode.

If possible, a holding pen next to the bath could be constructed with a concrete floor that drains back to the footbath. A simple, temporary footbath can be made from a tarp in a depression in the ground, or a sheet of plywood with 2 x 4 or 2 x 6 sides.

Operation of a Footbath

Sheep are herded into the footbath (once hooves are trimmed and cleaned) and held for the time required. Once finished, they should be allowed to stand on a concrete floor to permit their feet to dry and to allow excess solution to run back into the bath.

As lambs may be trampled in a crowded footbath, it may be better to treat them separately.

The time required for bathing the feet should be at least $\frac{1}{2}$ hour every 7-10 days.

The volume of fluid to be placed into a footbath can be judged by trial and error. However as a rough estimate, a footbath built using a single sheet of plywood (3 square meters) with a 2 cm depth of solution would require approximately 57.6 liters of solution depending upon the number of animals in the footbath.

Exact determination of the volume of solution necessary for a footbath is easily calculated by multiplying the length x width x liquid height of the footbath, in centimeters then converting to liters: e.g. 240 cm long x 120 cm wide x 2 cms of liquid = 57,600 cubic centimeters (or milliliters), which is equal to 57.6 liters of solution (1000 cubic centimeters or milliliters per liter).

Preparation of Solutions

Solutions described for use in footbaths include 10% zinc sulphate, 5% formalin and 10% copper sulphate. As the formalin and copper sulphate solutions are toxic and, in the case of copper sulphate, also stain the fleece, they will not be discussed further. Individuals interested in using these products should contact their Regional Veterinarian for further information.

10% Zinc Sulphate

This product is available as a feed grade powder (usually from chemical or livestock supply companies) or in a concentrated liquid form. As different products may have different concentrations of zinc sulphate in them, be sure to follow the specific directions attached to the products.

For mixing a 10% solution from powder (35.5% zinc), add 1 kg of powder into 9 liters of water. The addition of a small quantity of dish detergent (1 Tablespoon or 15 ml) to this solution will help it penetrate into the damaged tissues. The solution can be left in the footbath for the season if protected and topped up as necessary.

Do not use zinc sulphate on animals that have received formalin treatment within the last 6-10 weeks.

When preparing solutions, avoid contact of powder with eyes, mouth or skin as it may cause irritation. Protective equipment such as face masks, goggles, respirators and gloves should be considered. If any gets in eyes, rinse with large quantities of water and seek medical advice. Wash clothes and skin that come into contact with the solution.

Do not dispose of solution into or near waterways. When instructions are supplied with a product, it is important to carefully read them to be sure that effective levels are reached and that safety precautions are observed. This pamphlet is not intended to replace supplied instructions.