

# Guide for Control of External Parasites of Sheep and Goats

Revised by Marcy Ward<sup>1</sup>

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The College of Agricultural, Consumer and Environmental Sciences is an engine for economic and community development in New Mexico, improving the lives of New Mexicans through academic, research, and extension programs.

External parasites can greatly impact wool quality in sheep, milk production in sheep and goats, and overall animal health. Therefore it is very important to include a parasite control program in a herd health management plan. Increased regulations have removed many traditional pest control products from the market. With technological advancements, however, effective systemic parasite control is still possible.



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With the use of any drug or chemical, following label instruction is imperative for getting the proper results while reducing the risk of product resistance.

## FLEECEWORMS (WOOL MAGGOTS)

Even in well-managed flocks, fleeceworms sometimes become a problem during a long stretch of cool, damp weather. Spraying the rear ends of the sheep is a good control and preventive measure under such conditions. High-pressure sprays (150–250 lb pressure) are best; however, if a low-pressure sprayer (50–150 lb pressure) is used, be sure to add 1–2 lb of household detergent per 100 gallons of water. For control, see Table 1. Docked and tagged sheep are not usually bothered with fleeceworms.

**Coumaphos (Co-Ral).** Use a 0.125% solution made by mixing 4 lb of 25% Co-Ral wettable powder in 100 gallons of water, or 2 oz in 3 gallons of water. **Restrictions:** Coumaphos requires a 15-day pre-slaughter interval.

## SECONDARY SCREWORMS

Use 5% coumaphos (Co-Ral) dust or 2.5% ronnel (Korlan) livestock bomb as described earlier for fleece worms. No pre-slaughter interval is required with 5% coumaphos dust or 2.5% ronnel livestock bomb when used as a spot treatment.



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| <b>Insecticide</b>              | <b>Dosage [amount of insecticide per 100 gallons of water as spray, or use as indicated]</b>           | <b>Remarks [interval between application and slaughter]</b>                                                                                                                         |
|---------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Co-Ral spray                    | 4 lb of 25% wettable powder (sheep and goats)                                                          | Do not apply within 15 days of slaughter. Do not use within 14 days of freshening of dairy goats.                                                                                   |
| Lindane aerosol                 | Apply locally as fleeceworm treatment                                                                  | Follow manufacturer's recommendations.                                                                                                                                              |
| Permethrin spray, paint, or dip | Use 1 lb of 25% wettable powder to 60 gallons of water; spray affected areas or entire body or bedding | Do not use on goats. Do not use within 14 days of slaughter. Re-treat after 4–6 weeks if needed. Remove feed and water before spraying. Do not treat more often than every 14 days. |

### **SHEEP SCAB OR SCABIES**

Psoroptic scabies is thought to be eradicated in domestic sheep in the United States. Any sheep or goat suspected of being infected with scabies should be quarantined. Consult with your county Extension agent (<http://aces.nmsu.edu/county/>) or local veterinarian concerning regulations for treating and shipping as established by New Mexico law.

New Mexico has a scabies control and eradication law, administered and supervised by the state veterinarian of the New Mexico Department of Agriculture and accredited and approved by veterinarians throughout the state.

### **SHEEP LICE**

Lice will not be a problem in flocks sprayed or dipped regularly to control sheep ticks. Be sure all replacement ewes and rams are treated before they are added to the flock.

### **TICKS AND KEDS (SHEEP TICKS)**

Ticks are present in most rangelands. These insects not only spread disease but can also create ear infections if not controlled. Keds are actually wingless flies. Keds can be present year-round. Both insects can cause skin irritation, wool destruction, and even anemia if not controlled.

Treatment for sheep keds is easily applied and is often the most effective following spring shearing. Sheep keds should, however, be controlled any time significant numbers are found.

When heavily infested ewes are shorn, ticks will move to lambs that are still nursing. Consequently, treat lambs when the ewes are treated, but spray lightly and use **EXTREME CAUTION** when treating lambs under 3 months of age. **DO NOT** treat animals under 3 months of age with coumaphos under any circumstances.

Spraying or dipping once a year will usually keep sheep ticks under control. Be sure to treat all bucks and replacement ewes before adding them to the flock. Dipping does a more thorough job than spraying, but spraying can provide good control. High-pressure sprayers are more convenient and usually more effective for treating large flocks. An adequate job can be done with low-pressure sprayers (40–100 lb) if 1 to 2 pounds of household detergent are added to each 100 gallons of water.

For a list of insecticides that can be used to control these external parasites in sheep and goats, see pages 95–96 of the *Georgia Pest Management Handbook*, available at <http://nmsu.life/sheepgoatparasites> (Hinkle, 2017).

### **GENERAL PRECAUTIONS**

**DO NOT** spray animals in a confined, non-ventilated area.

**DO NOT** dip animals when they are thirsty or overheated. Water animals well before treatment so they will not drink the vat fluid.

**DO NOT** contaminate feed or drinking water.

**DO NOT** apply insecticides to sick animals or animals under stress.

**DO NOT** apply insecticides to lambs less than 3 months old, and use light applications on lambs 3 to 6 months old.

**DO NOT** treat animals with coumaphos 10 days before or after shipping or weaning, or after exposure to contagious or infectious diseases.

**DO NOT** apply coumaphos, dioxathion, or ronnel to animals in conjunction with oral drenches or with internal medications such as phenothiazine, or with natural or synthetic pyrethroids or their synergists, or with other organophosphates.

**DO NOT** use coumaphos, dioxathion, or ronnel on lactating milk goats.

**Table 2. Systemic Parasite Control**

| Anthelmintic          | Administration | Dosage      | Parasites controlled                                                                                     | Withdrawal <sup>a</sup> |
|-----------------------|----------------|-------------|----------------------------------------------------------------------------------------------------------|-------------------------|
| Ivermectin            | Injectable     | 1 mL/112 lb | Nasal bots, ticks, fleas, lice, roundworms, lung worms, and liver flukes                                 | 14 days                 |
|                       | Oral (drench)  | 3 mL/26 lb  |                                                                                                          | 11 days                 |
| Moxidectin (Cydectin) | Oral (drench)  | 1 mL/11 lb  | Nasal bots, ticks, fleas, lice, roundworms, lung worms, and liver flukes                                 | 14 days                 |
| Doramectin (Dectomax) | Injectable     | 1 mL/11 lb  | Nasal bots, mites, ticks, fleas, lice, roundworms, lung worms, hook worms, bankruptworms, and wire worms | 35 days                 |

<sup>a</sup>Withdrawal is the minimum number of days required by law between administration and time of slaughter.

## SYSTEMIC OPTIONS

There are many oral drench and injectable products on the market today that are effective in controlling both external and internal parasites (anthelmintics). These products tend to be more accepted across the industry, due to their efficacy, safety, and convenience. Table 2 provides product names, mode of administration, and parasites controlled.

## CONSIDERATIONS

Resistance to insecticides and anthelmintics has become a serious issue in the livestock industry. When these drugs and chemicals are used too frequently or are not properly administered, parasites develop a tolerance to these important health management tools.

In arid climates, pesticide management is only needed once or twice per year. It is important, regardless of the climate, that drug type or administration method is rotated regularly as part of a herd health management plan. Dosages based on weight should be properly calculated and adjusted accordingly.

Do not treat sick or very young animals. A kill off of a large infestation can result in digestive upset, further stressing an animal's immune system.

Topical application (anthelmintic “pour-ons”) are not recommended for woolled sheep; their efficacy is reduced due to poor administration and coverage.

## REFERENCES

Hinkle, N.C. 2017. Sheep and goats: External parasite control. In *Georgia Pest Management Handbook* (pp. 95–96). Athens: University of Georgia College of Agriculture & Environmental Sciences.

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