Diseases in Oregon Rabbits

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SUCCESS in the commercial rabbitry depends on good production records by the does. Many obvious factors such as breeding, feeding, housing, and disease affect the number and condition of the young a doe is able to produce throughout the year. A heavy mortality, particularly in the young, may well reduce the margin of profit to a point where the operator does not receive sufficient returns on his time and investment to justify his continuing as a rabbit raiser. A basic knowledge of the cause, symptoms, prevention, and treatment of the diseases of rabbits seen in Oregon will help all raisers.

In many cases the owner may treat the sick animal himself. In others, it is advisable to seek the help of a veterinarian.

It is important to remember that a diseased condition is any departure from the normal. Diseases may be due to bacterial infection, malnutrition, improper housing, overexposure, accidents, or any other circumstances that affect the health of the animal. There are certain basic rules whose application will not only increase the health and vitality of the stock but will also decrease the chances of disease.

The cardinal rules for success in rabbit raising are listed below:

- **EXAMINATION OF BREEDING STOCK AND NEW ADDITIONS TO THE HERD FOR HEALTH**: Careful examination of foundation stock, new additions, and returning show animals for ear canker, mange, fleas, lice, runny nose and eyes, vent disease, diarrhea, and sore hocks may well prevent the entrance of these diseases into the rabbitry. In many cases a health certificate or guarantee of health for a reasonable time may be obtained from the person selling the stock.

- **ISOLATION OF NEW ADDITIONS AND RETURNING SHOW STOCK**: Isolate new and returning show stock for a period of 2 weeks in specially located quarters. This is usually ample time for the symptoms to develop if rabbits are in the incubation period of disease.

- **PROMPT REMOVAL OF SICK ANIMALS FROM THE MAIN HERD**: In the event of a disease outbreak, sick animals should be removed from the main herd and placed in quarantined hutches reserved for this purpose. These hutches should be cleaned and disinfected after each use. If possible, expose the hutches to direct sunlight for several days before using again. Animals in these quarters should be fed and watered only after the rest of the herd is cared for.
PROPER DIET: Always remember that rabbits are totally dependent upon their owner for their feed. Feed should be both nutritious and clean. Well-nourished does produce healthier and stronger litters. Many diseases are the result of inadequate rations alone. All diseases thrive on a faulty diet.

Hutches. Hutches should be built to withstand year-round weather conditions. Proper construction must meet four requirements:

1. Sufficient room for the breed raised.
2. Easy to clean and disinfect.
3. Adequate ventilation without overexposure to harmful drafts.
4. Access to sunlight or shade. Animal should have free access to both if possible.

A GOOD PROGRAM OF SANITATION: Cleanliness is essential. Avoid leaving manure and urine saturated feed and bedding in the pen. Utensils should be cleaned periodically. Boiling water is excellent for this purpose. Proper hutch construction will facilitate cleaning. The use of a disinfectant such as a 2 per cent lye solution is recommended for use on hutches and equipment. In the event of parasitic outbreaks, the best results are obtained when this solution is applied in a scalding-hot condition. A 2 per cent solution can be made by placing a 12-ounce can of lye in a 5-gallon can of scalding water.

DISEASE PREVENTION: Always remember that "an ounce of prevention is worth a pound of cure." Good management will do much to raise healthier, more resistant rabbits and at the same time decrease the chance for exposure.

Supplementary information may be obtained on hutch construction and feeding from Oregon State College.

In the discussion of disease it is often convenient to list the condition, the symptoms, the prevention and treatment. The following diseases will be generally discussed to include the aforementioned topics.

**Pneumonia**

**Cause**

Any one of several organisms. Pneumonia is usually a secondary infection or complicating condition following any circumstance that will lower the animal's vitality. Overexposure, malnutrition, pregnancy, and lactation all lower the resistance of the doe.
DISEASES IN OREGON RABBITS

Symptoms
General symptoms seen in animal are high temperature, lack of appetite, inactivity, consumption of large amounts of water, difficult or labored breathing.

Treatment
Penicillin, 50,000 units, given into the muscles is effective against some types of organisms. Because of the variety of organisms present, penicillin is not always effective. Good nursing is essential. Prevent overexposure.

Prevention
1. Good sanitation.
2. Adequate diet.
3. Proper hutch construction.
4. Prevention of any factors lowering resistance of animals.

Pneumonia is especially prevalent in some parts of Oregon due to the inclement types of weather seen during certain times of the year. Nest box young are extremely susceptible if not properly protected.

Runny Nose

Cause
Bacterial infection or irritants or both.

Symptoms
Runny nose varying from watery to pussy, frequent sneezing, wiping nose with the front paws, and matting of fur.

Treatment
Same as pneumonia.

Prevention
Same as pneumonia.

"Snuffles"

"Snuffles" is a condition that is due to the presence of a specific organism in the respiratory system. This organism, belonging to the species Pastuerella, is infrequent in Oregon rabbits.
Ear Mange, Canker, or Wryneck

Cause
A microscopic animal or mite.

Symptoms
Droopy ears, scratching ears with hind feet, a discharge or brownish crust may be seen in the affected ear, usually foul smelling. In advanced cases, center of equilibrium in middle ear may be affected. Animal is unable to hold the head upright. (See illustration below.)

Treatment
Any bland oil applied to the ear by means of a medicine dropper; one-half dropper full in infected ear on alternate days over a 2-week period is usually successful. Many commercial preparations contain urea, sulfur, or other disinfectants in combination with the oil. Rapid improvement has been seen following the use of commercial fly spray placed in the ear. One treatment, using a standard spray gun, is usually adequate.

Prevention
Examine new additions to herd, isolate sick animals, and thoroughly disinfect cage of affected animal. Adjoining cages should be cleaned too.
Skin Mange

Cause
A mite, similar, but not identical, to ear mange mite.

Symptoms
Denuded areas; skin may show no other lesions. In some cases skin is inflamed and has small eruptions; intense scratching with rear paw may occur. Yellow flakes of dried blood serum may be seen.

Treatment
Clip and clean affected area. Drugs containing pyrethrum and derris root compounds are helpful. A mixture of one part flowers of sulfur and three parts lard may be applied at 4-day intervals. Due to the highly contagious nature of this condition it is often advisable to seek professional help from your veterinarian.

Prevention
Same as for ear canker.

Infected or Watery Eyes

Cause
May be due to any one of several types of bacteria, dust particles, strong urine odors or any other condition that may cause an irritation to the eye.

Symptoms
A discharge from the eyes varying from a thin, watery type of discharge to a thick, pussy one. The rabbit will often rub its eyes with its front paws and thereby cause a matting of the hair on the front legs. In some cases, matted fur may fall out leaving a hairless area around the eye.

Treatment
Prompt removal of dust and other irritants may correct early cases. In advanced cases, ophthalmic ointment should be put in each eye several times a day. It is best to start with a bland ointment; if results are not satisfactory other ointment should be used. Penicillin, Sulfathiazole, Sulfadiazine, Argyrol or other ointments may fail to work alone while a combination of two may help. This is because more than one organism may be causing the trouble.

Prevention
Good sanitation, protection against irritants, and a wholesome diet are musts. Preventing conditions that may lower the vitality of the animal is also helpful.
Liver Coccidiosis

Cause
A small animal or protozoan about 1/750 of an inch long.

Symptoms
Usually the only evidence is the presence of numerous white spots in the liver. In advanced cases, the animal may go off feed, become emaciated and listless. Frequently the rabbit has a bloated appearance due to the greatly enlarged liver. (See illustration below.)

Treatment
No sure, successful treatment as yet.

Prevention
Prevention is based on the interruption of the life cycle of the parasite. Like all living organisms, the organism needs water to live. Prevention is based on removing all pellets that contain the parasites and keeping the hutch floors clean and dry at all times. A blow torch is excellent for this purpose and should be used on the floor on alternate days in the event of an outbreak. Sulfadiazine at the level of 0.05 of 1 per cent in the drinking water is effective on the liver type of coccidia only.
Intestinal Coccidia

**Cause**
Any one of four species of coccidia.

**Symptoms**
Loose stools may be the first symptom. In advanced cases the animals are listless, not interested in food, frequently pot-bellied, with periods of slobbering and teeth grinding. Diarrhea is always present in severe cases. Parasites can be seen in microscopic examination of the stools.

**Treatment**
No known medication is helpful.

**Prevention**
Same as liver coccidiosis.
Urine or Hutch Burn

Cause
The irritating action of urine-contaminated material upon mucous membranes. These membranes usually become infected if prompt treatment is not given to mild cases.

Symptoms
Inflammation of the mucous membrane near the external sex organs. The tissues may be swollen, the mucous membranes may be chafed or broken, discharging either blood, pus, or a combination of both.

Treatment
Remove the contaminated material. In mild cases a bland ointment containing lanolin may correct the condition. In more advanced and infected cases an antiseptic powder used in combination with 50,000 units of penicillin is effective.

Prevention
Remove all urine-soaked material.

Vent Disease
(Spirochetosis)

Cause
A spirochete or cockсrew-shaped organism, transmitted from one animal to the other in the breeding act.

Symptoms
Cannot be told from "urine burn" in many cases. This condition can be accurately diagnosed only in a laboratory. There is swelling and inflammation of the external genital organs.

Treatment
Inject 50,000 units of penicillin intramuscularly. If a crystalline form of penicillin is used three injections of 20,000 units given at 12-hour intervals is effective. If a type of penicillin is used that has a lingering action (penicillin in oil or procain penicillin) one injection is all that is necessary.

Prevention
Examine all new stock for lesions associated with vent disease—do not breed any animal showing symptoms. Thoroughly disinfect all hutches and equipment that has been exposed.
Mucoid Enteritis—Bloat

Cause
Unknown; seen primarily in nursing young or weanlings.

Symptoms
Same as intestinal coccidiosis: lack of appetite, listlessness, rough hair coat, pot-bellied, salivation or slobbering and often an intense thirst. In many cases the affected animal will pass a clear, jelly-like material with the droppings as illustrated in the extreme right side of the picture below.

Treatment
No known treatment, other than changes in the diet. Recommendations made by the Fontana Rabbit Experiment Station include:

- Removal of all feed and water for 48 hours.
- On the third day give the animal small amounts of greens and water.
- Gradually increase amounts of feed until the rabbit is back on a normal diet. Full diet should not be reached for at least a week after treatment is started.

Prevention
Good sanitation.
Sore Hocks

Cause
Seen usually in rabbits that have a poorly developed pad; usually the result of constant bruising or injury to the hocks. Infection of hock may follow.

Symptoms
Affected animal shows a tendency to tread with hind feet. Hocks may show a variation ranging from a slight inflammation to an open running sore. In advanced cases, animal will fail to breed.

Treatment
Correct the conditions causing the injury. If wire floor is used, a board or covering of bedding is advisable. Mild protective ointments containing lanolin may be helpful in mild cases. In infected cases the use of penicillin in conjunction with the ointment is advisable: 50,000 units is sufficient.

Prevention
Remove the cause. In the case of heavy animals it is often advisable to cover a portion of the wire hutch floor with boards. Protect animals from disturbing influences that may excite thumping.