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COCCIDIOSIS CONTROL

by

E. M. Dickinson
Department of Veterinary Medicine

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COCCIDIOSIS CONTROL

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The problem of coccidiosis may be very serious for some poultrymen during the forthcoming brooding and rearing season. With a shortage of help and the increase in number of chickens on many farms, a combination of factors is present that makes it very favorable to build up a severe infection of coccidiosis. In this connection it is desirable to emphasize the importance that proper management and sanitation play in the control of coccidiosis. A program of sanitation for brooding and rearing young chickens should include measures that will control outbreaks of clinical coccidiosis. (Clinical coccidiosis refers to an infection of coccidia that produces noticeable symptoms in infected birds.) To do this most effectively, knowledge of the parasite that causes this disease is essential.

Outbreaks of coccidiosis that result in symptoms, lesions, and mortality may be caused by heavy infections of one or more of the several kinds of coccidia that infect chickens.

Mild infections produce immunity.

Repeated mild infections of coccidia result in a protection or immunity being produced in the infected chickens. Further, the mild infections have no apparent detrimental effect on the ability of the chickens to reproduce or lay eggs. The immunity produced by infections with one species of coccidia does not protect against the others.

The program of sanitation and cleaning may be strict or lenient, depending on the circumstances on the poultry farm under consideration. It is not desirable to maintain too rigid a cleaning schedule, neither should an excessive accumulation of droppings and contamination be allowed to collect. A schedule of cleaning that allows for a mild coccidial infection and yet is sufficiently often to prevent massive infections is desirable. Since a suitable cleaning schedule for conditions on one poultry farm may not be satisfactory for conditions on another, each poultryman must consider his own conditions and the cleaning and arrangement necessary to bring about reduction of massive doses of coccidia.

Poultrymen who wish more details concerning coccidiosis and its control may obtain a copy of Oregon Agricultural Experiment Station Bulletin 405, entitled "Coccidiosis Control in Chickens," from any county agricultural agent or by writing to Oregon State College, Department of Veterinary Medicine, Corvallis, Oregon.

Nutritional flush ineffective as treatment.

Many poultrymen have felt that a nutritional flush of dried skim milk, dried whey, dried buttermilk, or molasses would control or prevent cecal coccidiosis. Recent experimental feeding trials have shown that this is not the case. The tables at the end of this article show the mortality among pens of chicks experimentally infected with cecal coccidiosis that were fed dried skim milk and molasses as possible treatments.

Milk and milk products should be recognized for what they are worth. They are highly desirable food concentrates that contain several important nutritive substances but they are not a treatment for infectious disease. Additional feeding of milk or milk products to normal healthy birds will often stimulate the appetite and result in a more rapid growth. Since milk or milk products are excellent food concentrates for normal growth and health of chickens and turkeys it makes an increasingly valuable food for sick birds.

Milk products should be conserved.

With the scarcity of milk and milk products it is important to utilize this valuable food concentrate where it will do the most good. It is suggested that nutritional flushes containing a high percentage of dried whey or dried skim milk be discontinued since they do not appear to have any effect on an outbreak of coccidiosis.

Experimental evidence indicates that the mashers for breeders and starting chicks and poults should be the first to benefit from the limited supplies of milk and milk products available.

Sanitary program is best control.

In case an outbreak of cecal coccidiosis occurs in brooder chicks prompt action should be taken. The brooder house floor and all surfaces where droppings may collect and be accessible to the chicks should be thoroughly cleaned by sweeping and scraping. This cleaning should be done each day for 5 to 7 days. No fluid disinfection should be used on the floor. To save litter and make the daily cleaning easier, use only enough litter on the floor to prevent the droppings from sticking. A stiff barn broom is usually the best utensil to use for cleaning. There should be little or no milk or milk products used for nutritional flushes. To stimulate the appetite the birds should be fed daily a supplement of moist mash, pellets, or finely cut fresh green feed, as much as they will clean up in 30 minutes. This will encourage food consumption and should not be considered as medicinal treatment but as special nutritional care for sick birds.

TRIAL I. MORTALITY IN CHICKS INOCULATED WITH CECAL COCCIDIA (*Eimeria tenella*) THAT WERE GIVEN DRIED SKIM MILK AND MOLASSES AS TREATMENTS FOR 24 HOURS AND 8 HOURS RESPECTIVELY.

Pen	Number chicks	Explanation	Mortality	
			Number	Per cent
1	25	Chicks inoculated with cecal coccidia when 17 days old. When blood was seen in droppings, mash containing 30 per cent dried skim milk was fed for 24 hours.	23	92.0
2	23	Chicks inoculated with cecal coccidia when 17 days old. When blood was seen in droppings, only water with 1.5 per cent molasses was given for 8 hours.	20	86.9
3	24	Control chicks (inoculated). Chicks inoculated with cecal coccidia when 17 days old. No treatment was given.	19	79.1
4	24	Control chicks (uninoculated). Chicks were not inoculated with coccidia but were otherwise fed and brooded in the same manner as the other chicks up to the time of inoculation and treatment.	0	0.0

A comparison of mortality due to cecal coccidiosis, in chicks in pens 1, 2, and 3, indicates that treatment with a nutritional flush was of no value. A comparison of mortality between trials I, II, and III should not be attempted because different dosages and different cultures of coccidia were used in each trial. The dosage and culture were the same, however, for all chicks inoculated in each trial.

TRIAL II. MORTALITY IN CHICKS INOCULATED WITH CECAL COCCIDIA (*Eimeria tenella*) THAT WERE GIVEN DRIED SKIM MILK AND MOLASSES AS TREATMENTS FOR 72 HOURS AND 24 HOURS RESPECTIVELY.

Pen	Number chicks	Explanation	Mortality	
			Number	Per cent
1	25	Chicks inoculated with cecal coccidia when 18 days old. When blood was seen in droppings, mash containing 30 per cent dried skim milk was fed for 72 hours.	17	70.8
2	22	Chicks inoculated with cecal coccidia when 18 days old. When blood was seen in droppings, only water with 1.5 per cent molasses was given for 24 hours.	11	50.0
3	22	Control chicks (inoculated). Chicks inoculated with cecal coccidia when 18 days old. No treatment.	15	68.1
4	25	Control chicks (uninoculated). Chicks were not inoculated with coccidia but were otherwise fed and brooded in the same manner as the other chicks up to the time of inoculation and treatment.	0	0.0

A comparison of mortality due to cecal coccidiosis, in chicks in pens 1, 2, and 3, indicates that treatment with a nutritional flush was of no value. A comparison of mortality between trials I, II, and III should not be attempted because different dosages and different cultures of coccidia were used in each trial. The dosage and culture were the same, however, for all chicks inoculated in each trial.

TRIAL III. MORTALITY IN CHICKS INOCULATED WITH CECAL COCCIDIA (*Eimeria tenella*) THAT WERE GIVEN DRIED SKIM MILK AND MOLASSES AS TREATMENTS FOR 7 DAYS.

Pan	Number chicks	Explanation	Mortality	
			Number	Per cent
1	28	Chicks inoculated with cecal coccidia when 21 days old. Seventy-two hours after coccidia inoculation, before symptoms were observed, mash containing 30 per cent dried skim milk was fed for 7 consecutive days.	6	21.4
2	28	Chicks inoculated with cecal coccidia when 21 days old. Seventy-two hours after coccidia inoculation, before symptoms were observed, water containing 1.5 per cent molasses was available for 6 hours each day for 7 consecutive days.	7	25.0
3	14	Control chicks (inoculated). Chicks inoculated with cecal coccidia when 21 days old. No treatment was given.	3	21.4
4	14	Control chicks (uninoculated). Chicks were not inoculated with coccidia but were otherwise fed and brooded in the same manner as the other chicks up to the time of inoculation and treatment.	0	0.0

A comparison of mortality due to cecal coccidiosis, in chicks in pens 1, 2, and 3, indicates that treatment with a nutritional flush was of no value. A comparison of mortality between trials I, II, and III should not be attempted because different dosages and different cultures of coccidia were used in each trial. The dosage and culture were the same, however, for all chicks inoculated in each trial.