COCCIDIOSIS

• Common parasitic disease of the intestinal tract of chickens and turkeys caused by a single celled protozoan parasite of the genus *Eimeria* which are commonly referred to as coccidians
• Presentations:  
  • Clinical coccidiosis
  • Subclinical coccidiosis

CONTROL PROGRAMS

• Prevention  
  • Chemoprophylaxis
    • Chemical
    • Ionophore
    • Chemical + ionophore
  • Vaccination
    • Live attenuated and non-attenuated
• Treatment  
  • Chemical: sulfa and amprolium

INTRODUCTION

• Coccidiosis  
  • Mortality
  • Poor growth
  • Decreased productivity
  • Costly treatment
• Diatomaceous Earth  
  • Skeletal remains of single-celled algae
  • Natural, organic, non-toxic
  • Except: long-term inhalation
  • Use for external parasite control
  • May reduce internal parasite load

MATERIALS AND METHODS

• 120 chickens
• Weigh weekly
• 4 treatments  
  • 20E: 2% DE
  • 5DE: 5% DE
  • A: Amprolium
  • C: no feed or water manipulations
• 5,000 oocysts, oral gavage  
  • Daily coccidial oocyst count
• Necropsy

Evaluation of Diatomaceous Earth as a Treatment for Coccidiosis in Poultry

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RESULTS

• No appetite changes
• No behavior changes
• Mild fecal changes
  • Days 5 and 6 PI
  • Color
  • Odor

• BW and oocyst counts:
  • 2-way ANOVA

RESULTS

Weight Changes

DISCUSSION

• 100% food grade DE was chosen
  • Organic
  • Less than 0.5% crystalline silica - less irritant
• Initial heavier weight with DE
• PI inoculation:
  • Large number of E. tenella oocysts
  • Lesion scores 3+
  • Decreased body weight

RESULTS

7 Days Post inoculation

READ OUTS

100,000 200,000 300,000 400,000 500,000 600,000
4 5 6 7 8 9 10

RESULTS

Oocyst counts

CONCLUSIONS

• DE may help to increase weight
• DE cannot be used as coccidian treatment

... WHAT IS NEXT?
Effect of DE on other ascarids and other nematodes
Thank you!

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