

RESEARCH PROJECTS COMPLETED - 2005	Date Completed
<p data-bbox="147 331 467 390">Dr. C. Annett University of Saskatchewan</p> <p data-bbox="147 422 1338 480">‘Prevalence of <i>Clostridium perfringens</i> type A in broiler chickens in Saskatchewan and its effects on flock performance and condemnations at slaughter’.</p> <p data-bbox="147 512 1451 846"><i>Clostridium perfringens</i> (CP) is the bacterium that causes necrotic enteritis in broiler chickens. The consequences of necrotic enteritis include increased mortality, reduced average daily gain, decreased feed efficiency and increased condemnations at slaughter. Dr. Annett’s objectives were to i) identify the prevalence of <i>Clostridium perfringens</i> in Saskatchewan broiler flocks ii) characterize and quantify production losses due to this bacterium and iii) identify management practices that effect the incidence of CP infections. The study involved visiting 23 farms and obtaining fecal samples from 41 barns. In two rotations Dr. Annett determined that <i>Clostridium perfringens</i> was isolated from 12% of birds in barns and 18% of birds at the processing plant. <i>Clostridium perfringens</i> were present in 32 of the 38 flocks in the first rotation and 33 of the 37 flocks sampled during the second rotation. Anti-alpha toxin antibody levels were present in both chicks at hatch and broilers at slaughter, however, <i>Clostridium perfringens</i> could not be isolated from newly hatched chicks. All flocks had birds infected with coccidial organisms and it was hypothesized that feed could represent a means for a continual source of <i>Clostridium perfringens</i>.</p> <p data-bbox="147 877 1446 1001">Data collected from the study could not confirm that <i>Clostridium perfringens</i> had an effect on condemnations, birds arriving dead at the plant, total mortality, weight gain or feed conversion. Factors that affect the incidence of <i>Clostridium perfringens</i> in broiler flocks are relative humidity and CO₂, feed form, antibiotic type, floor type and barn level on which the birds are raised.</p> <p data-bbox="147 1033 1023 1064">The project was approved in July, 2002 at a total cost of \$94,500 over three years.</p>	2005/03/01
<p data-bbox="147 1207 467 1266">Dr. S. Gomis University of Saskatchewan</p> <p data-bbox="147 1297 1170 1329">‘Is Inclusion Body Hepatitis a Primary or Secondary Disease in Broilers in Saskatchewan’</p> <p data-bbox="147 1360 1451 1484">In recent years, inclusion body hepatitis has become an economically important disease in Western Canada. Dr. Gomis’ objective was to determine if outbreaks of inclusion body hepatitis in broiler flocks in Saskatchewan were caused by other primary diseases, in particular chicken infectious anemia or infectious bursal disease that compromise the immune system or whether inclusion body hepatitis is itself a primary disease.</p> <p data-bbox="147 1516 1451 1875">Birds for the study were selected from 17 broiler breeder flocks from 8 of the 9 producers in the province and placed in 31 flocks owned by 11 broiler producers. Inclusion body hepatitis was present in 21 of the 31 flocks and accounted for more than 10% of total mortality in 7 of these 21 flocks. Five source flocks were associated with higher incidences if inclusion body hepatitis, however, Dr. Gomis concluded that management practices were not responsible for these higher incidences. Antibody levels for IBD and CIA were measured in the 17 breeder flocks, in 20 bird samples of day old chicks and at slaughter. The high levels of antibodies in breeders and day old chicks indicated that inclusion body hepatitis and chicken infectious anemia were under control in the breeder flocks and that mothers passed immunity to their chicks. Since maternal antibodies dissipate after about 21 days, the lower levels of antibodies at slaughter indicated that the birds had not been exposed to infectious bursal disease or chicken infectious anemia during grow-out. Necropsies conducted when broilers were two, three and four weeks of age and at slaughter found no relationship between inclusion body hepatitis or chicken infectious anemia. Thus the results suggest that inclusion body hepatitis in Saskatchewan is not associated with infectious bursal disease or chicken infectious anemia and is itself a primary disease.</p>	2005/10/12

The project was approved in July, 2004 at a total cost of \$35,000.

Journal Articles:

Avian Diseases

Inclusion Body Hepatitis as a Primary Disease in Broilers in Saskatchewan, Canada
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