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Liver fluke infestation in Kansas fed slaughter cattle

Abstract

Feedlot cattle from 1,687 pens totaling 290,183 head were evaluated at slaughter for the presence of liver flukes. Overall, 4.92% of the cattle were found to be infected. Only 15.2% of all pens of cattle were found to be completely free of flukes. However, only 5.3% of the pens had greater than 15% of the cattle infested. Beef steers had a higher level of infestation (5.2%) than beef heifers (4.4%). Holstein steers had an overall infestation rate of 4.4%.

Keywords

Cattlemen's Day, 1989; Kansas Agricultural Experiment Station contribution; no. 89-567-S; Report of progress (Kansas State University. Agricultural Experiment Station and Cooperative Extension Service); 567; Beef; Liver fluke; Slaughter cattle

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K**S****U****LIVER FLUKE INFESTATION IN KANSAS FED
SLAUGHTER CATTLE****S.B. Laudert¹**

Summary

Feedlot cattle from 1,687 pens totaling 290,183 head were evaluated at slaughter for the presence of liver flukes. Overall, 4.92% of the cattle were found to be infected. Only 15.2% of all pens of cattle were found to be completely free of flukes. However, only 5.3% of the pens had greater than 15% of the cattle infested. Beef steers had a higher level of infestation (5.2%) than beef heifers (4.4%). Holstein steers had an overall infestation rate of 4.4%.

Introduction

The economic impact of liver flukes is substantial in pens of feedlot cattle known to be heavily infected with the parasite; daily gain can be reduced up to 20% and feed conversion increased up to 25%. The total dollar loss to the industry is difficult to determine, however, because research data on performance losses is minimal and most cattle thought to be completely free of the parasites, in fact, may be infested at low rates. This study was conducted to ascertain the incidence of liver flukes in slaughter cattle fed in Kansas feedlots.

Experimental Procedures

Periodically throughout 1986 and 1987, random pens of cattle were monitored during slaughter. Following evisceration, USDA Food Safety and Inspection Service employees evaluated livers for evidence of liver fluke infestation. All livers were evaluated, except for severely abscessed livers that were condemned prior to fluke evaluation. Thus, the order of inspection may have introduced a slight negative bias in the incidence of flukes. No differentiation was made between livers with live flukes or with fluke damage or between species of fluke; all were reported as infested. All pens of cattle evaluated in this study were classified as beef-type steers or heifers or Holstein steers. Only pens of 30 head or more were evaluated.

Results and Discussion

Results of the slaughter survey are presented in Table 33.1. Only 13.6% of all pens of beef steers were entirely free of liver fluke infestation. However, 67.0% of the 1062 beef steer pens surveyed had less than 5% of the animals with flukes. Beef heifers and Holstein steers had similar infestation patterns. Overall, the presence of flukes in beef steers, heifers, and

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Holstein steers was 4.73, 4.12, and 3.34% in 1986 and 5.76, 4.74, and 5.20% in 1987, respectively.

These data indicate that although liver flukes in feedlot cattle are widespread, the frequency of occurrence is small; only 29 of 1687 pens had greater than 25% of the cattle per pen infested.

Table 33.1. Incidence of Liver Flukes in Kansas Fed Slaughter Cattle

| Class of Cattle | % of Cattle/Pen With Flukes | Number of Pens | | Total Cattle | | Percent of Pens | |
|-----------------|-----------------------------|----------------|------------|--------------|---------------|-----------------|--------------|
| | | 1986 | 1987 | 1986 | 1987 | 1986 | 1987 |
| Beef Steers | 0.0 | 72 | 72 | 8,414 | 7,172 | 15.7 | 12.0 |
| | 0.1 - 5.0 | 247 | 321 | 46,268 | 60,002 | 53.8 | 53.2 |
| | 5.1 - 10.0 | 96 | 118 | 20,960 | 23,475 | 20.9 | 19.6 |
| | 10.1 - 15.0 | 25 | 49 | 4,675 | 10,067 | 5.4 | 8.1 |
| | 15.1 - 25.0 | 15 | 29 | 2,824 | 5,084 | 3.3 | 4.8 |
| | Over 25.1 | 4 | 14 | 819 | 2,434 | 0.9 | 2.3 |
| | TOTAL | | 459 | 603 | 83,960 | 108,234 | 100.0 |
| Beef Heifers | 0.0 | 46 | 41 | 5,622 | 4,127 | 18.0 | 17.7 |
| | 0.1 - 5.0 | 147 | 114 | 28,535 | 19,751 | 57.4 | 49.3 |
| | 5.1 - 10.0 | 40 | 54 | 8,040 | 10,385 | 15.6 | 23.4 |
| | 10.1 - 15.0 | 12 | 14 | 2,167 | 2,676 | 4.7 | 6.1 |
| | 15.1 - 25.0 | 8 | 3 | 1,229 | 382 | 3.1 | 1.3 |
| | Over 25.1 | 3 | 5 | 610 | 531 | 1.2 | 2.2 |
| | TOTAL | | 256 | 231 | 46,203 | 37,852 | 100.0 |
| Holstein Steers | 0.0 | 22 | 4 | 1,812 | 322 | 24.4 | 8.3 |
| | 0.1 - 5.0 | 51 | 29 | 5,597 | 3,184 | 56.7 | 60.4 |
| | 5.1 - 10.0 | 10 | 4 | 982 | 419 | 11.1 | 8.3 |
| | 10.1 - 15.0 | 5 | 5 | 454 | 502 | 5.6 | 10.5 |
| | 15.1 - 25.0 | 1 | 4 | 80 | 418 | 1.1 | 8.3 |
| | Over 25.1 | 1 | 2 | 64 | 100 | 1.1 | 4.2 |
| | TOTAL | | 90 | 48 | 8,989 | 4,945 | 100.0 |