

RESEARCH UPDATE

LIVER ABSCESSSES AMONG COMMERCIALY FED CATTLE

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January 18, 1982

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For five years the primary causes of U.S.D.A. liver condemnations have been studied. To date the information gathered includes 278 pens of cattle including over 56,000 head of cattle fed in commercial lots in the Texas-Oklahoma Panhandle, Southeastern Colorado, Eastern New Mexico and Southwestern Kansas. Over 60 feedlots are represented in these data. Carcass information has also been collected and is presented in Table 1. Liver condemnation data are presented in Table 2.

TABLE 1. THE INCIDENCE OF LIVER ABSCESSSES
AMONG COMMERCIALY FED PENS OF CATTLE

	\bar{X}	SD
Number of Cattle	56,658	
Number of Pens	278	
Avg. Number of Cattle per Pen	203.80	±125.18
Average Live Weight at Slaughter, lbs.	1099.53	±92.64
Average Carcass Weight, lbs.	694.27	±55.10
Average Dressing Percent, %	63.30	±1.58

During 1980-1981 a concentrated effort was made to study the effects of liver abscess upon feedlot performance. Efforts to relate performance information to condemnation data were confounded

by differing management practices among yards. It, therefore, became apparent that the influence of liver abscesses upon feed-lot performance must be studied on a within yard basis.

The opportunity presented itself to study this effect when a cooperating feedyard pursued an extensive liver abscess control program. The partial results of our survey are presented in Tables 3 and 4. A preliminary analysis of these data indicate that within a feedyard management system the control of liver abscess does improve average daily gain and tends to improve feed conversion.

TABLE 2. THE PRIMARY CAUSES OF LIVER CONDEMNATIONS
AMONG PENS OF COMMERCIALY FED PENS OF CATTLE

	Pen Average	SD
	n = 278	
Minor Abscesses, %	13.67	±5.55
Major Abscesses, %	18.49	±12.48
Total Abscesses, %	32.13	±14.48
Flukes, %	3.79	±4.08
Contamination, %	2.33	±4.00
Others, %	1.16	±1.89
Total Condemnations, %	39.45	±15.61

At this time, data on only five pens have been collected and the carcass information is incomplete. It is hoped that additional data can be collected in the next few months to balance the number of pens surveyed and improve the validity of these data.

TABLE 3. THE EFFECT OF AN ACTIVE¹ vs MODEST² LIVER
ABSCESS CONTROL PROGRAM UPON THE PERCENTAGES OF
LIVER CONDEMNATIONS AMONG COMMERCIALY
FED PENS OF CATTLE

	Modest Abscess Control Program		Active Abscess Control Program	
	n = 15		n = 5	
	\bar{X}	SD	\bar{X}	SD
Percent Livers Accepted, %	39.02 ±	10.82	89.18 ±	2.78***
Percent Minor Abscesses, %	17.47 ±	6.90	3.38 ±	1.79***
Percent Major Abscesses, %	27.25 ±	7.97	3.06 ±	2.45***
Percent Total Abscesses, %	44.72 ±	8.19	6.29 ±	2.70***
Percent Fluke Condemnations, %	3.21 ±	2.45	2.73 ±	2.26
Percent Contamination Condemnations, %	12.17 ±	9.98	.93 ±	1.29
Percent Other Causes, %	.23 ±	.31	.79 ±	.43***
Percent Total All Causes, %	60.78 ±	10.89	11.71 ±	3.73***

1. Feedlot management with little emphasis upon reducing the incidence of liver abscesses but with the intermittent feeding of antibiotics.
2. Feedlot management practices including the daily feeding of antibiotics that have been shown to reduce the incidence of liver abscesses among cattle fed high concentrate rations.

***P<.01

TABLE 4. THE EFFECT OF AN ACTIVE vs MODEST LIVER ABSCESS CONTROL PROGRAM UPON THE PERCENTAGE OF MAJOR ABSCESSSES, AVERAGE DAILY GAIN AND FEED EFFICIENCY AMONG PENS OF COMMERCIAALLY FED CATTLE

	Modest Abscess Control Program		Active Abscess Control Program	
	n = 15		n = 5	
	\bar{X}	SD	\bar{X}	SD
Major Abscess %/pen, %	27.24 ±	7.97	3.06 ±	2.43***
Average Daily Gain, lbs.	2.62 ±	.18	3.02 ±	.19***
Feed Conversion lbs./lb. of Gain, lbs.	7.48 ±	.71	6.80 ±	.55

1. Dry matter basis.

***p<.001