

Parameter	Type of analysis	Using all data			Without block 1		
		A-placebo	B-NPCoat	P level	A-placebo	B-NPCoat	P level
Initial body wt (lb)	ANOVA	499	504	0.50	500	507	0.47
Final body wt (lb)	ANOVA	650	651	1.00	640	657	0.61
Average daily gain (lb)	ANOVA	2.8	2.8	0.90	2.7	2.9	0.80
Treatment cost per head (\$)	ANOVA	17.10	14.90	0.65	17.80	14.50	0.59
Treatments for BRD (%)	Chi-square	62.7	57.3	0.24	64.1	55.6	0.55
Re-treatments for BRD (%)	Chi-square	39.9	31.9	0.07	39.5	28.6	0.03
No. treatments for BRD per head	Chi-square	1.3	1.2	1.00	1.4	1.1	0.51
Death loss from BRD (%)	Chi-square	12.4	8.6	0.23	14.1	7.6	0.04
Chronic rate from BRD (%)	Chi-square	5.6	4.3	0.53	5.9	4.9	0.65
Case fatality rate from BRD (%)	Chi-square	17.8	13.5	0.41	19.7	11.8	0.14
Total mortalities (%)	Chi-square	13.3	8.6	0.23	14.6	7.6	0.05

(a) BRD = bovine respiratory disease

(b) Percent mortality is defined as percentage of animals started on study that died.

(c) Case fatality rate is defined as percentage of animals that were treated for BRD that later died.

Significance

In an analysis of all data, retreatment ($P = 0.07$) rates tended to be lower in cattle treated with NPCoat Intranasal™.

Analysis of the data without block 1 resulted in an improved response from treatment with NPCoat Intranasal™. This group of animals may have been gathered at the salebarn for a longer period of time and handled differently at the feedyard than were the other four blocks of animals. Without block 1, calves treated with NPCoat Intranasal™ showed significant improvements in percent death loss from BRD ($P = 0.04$), percent total

mortalities ($P = 0.05$) and percent retreatments for BRD ($P = 0.03$) and tended to show improvements in case fatality rate from BRD ($P = 0.14$).

In this study, it appeared that NPCoat Intranasal™ tended to be effective in reducing respiratory disease incidence and death loss when incorporated into the receiving program for feedlot calves.

Footnote

^a Camas, Inc., 260 W. Derrynane St., Le Center, MN 56057.

Risk Analysis for Beef Cow-Calf Retained Ownership Decision Making: Utilization of Historical Performance Data

B.J. White, DVM¹; J.D. Anderson, PhD²

¹Department of Pathobiology / Population Medicine, College of Veterinary Medicine, Mississippi State University, Mississippi State, MS

²Department of Agricultural Economics, Mississippi State University, Mississippi State, MS

Introduction

Cow-calf producers recognize the value of post-weaning performance information and have collected a large volume of data through alliances and university feed-out programs. These statistics are largely used to address and guide production decisions including ge-

netic, health and management issues. Value Based Marketing (VBM) of fed cattle is increasingly popular, and individual animal value is determined based on specific carcass merits. This system of marketing increases income variability compared to traditional live-weight marketing of fed cattle. This research is designed to illustrate how feedlot and carcass performance infor-

mation can be incorporated into the cow-calf producer's risk analysis decisions regarding retained ownership from weaning to harvest. Economic risk of retaining ownership is based on uncertainty of market conditions, cattle performance and expected income based on carcass merits. This study addresses utilization of historical performance data to compare the market value of feeder cattle with their expected value as finished cattle in a VBM system. From a feeder cattle producer's perspective, this is a very important issue. If, from past experience with the same or similar genetics and management, a producer knows with some degree of certainty that his cattle will perform well in the feedlot and/or in terms of carcass merits, then the market price may significantly undervalue those cattle. The producer would be better off to retain ownership of the calves or to market feeder cattle through some alternative means (e.g., direct sales to a cattle feeder with knowledge the cattle's performance potential) in order to receive a price that more accurately reflects their true value.

Materials and Methods

A data set of 2,763 calves fed in the Mississippi Farm to Feedlot program from 26 different farms over the period from 1993 to 2002 was evaluated in this study. Historic price information from USDA is used to compare the average market value of feeder cattle to their value as input into a feeding enterprise with grid pricing. Differences between this derived value and the market value of feeder cattle are examined to determine the degree to which market prices in the feeder cattle market reflect the "true" value of feeder cattle. These differences are evaluated at the farm level to illustrate how individual producers might use this information in marketing decision making.

Results

As in the average pricing of fed cattle, differences between prices for individual feeder calves are not necessarily an accurate reflection of true differences in

value. A significant disparity appears to exist between the average feeder calf market price and the average grid-based value of these calves. These preliminary results indicate that on average, the grid-based value of feeder calves from this study was \$21.82/head greater than their market value. This implies that, on average, these producers would be better off retaining calves and marketing fed cattle on a VBM basis. This calculation of the true feeder calf value derived from grid price of fed cattle reveals the imprecision of price signals communicated to feeder calf producers. Another key issue is the large increase in price variability between the two pricing methods. This is most appropriately viewed on a farm-by-farm basis. Preliminary results indicate average differences per hundredweight between grid-based and market value of feeder calves ranging from \$-2.08 to \$7.68 per hundredweight for different farms. Therefore, the average benefit of grid marketing cannot be applied to all farms equally, and the retained ownership decision must be addressed on an individual farm basis. Historic farm-specific production information can be used along with expected price relationships to develop a distribution of potential returns used by the decision maker to assess the riskiness of retained ownership in comparison to the sale of feeder cattle.

Significance

The preliminary findings of this study illustrate the value of the appropriate use of historical performance information to guide retained ownership decisions. Uncertainty of future events leads to inherent risk and increased predictability of performance allows decision-makers to more accurately assess marketing options. These results quantify a fairly strong incentive for producers of above average quality feeder cattle to look for non-traditional marketing alternatives that will reward them for the quality of their cattle. From the farm-level perspective, information on the difference between feeder cattle market value and potential value in a grid-pricing system represents a potentially useful decision-making tool.