



## Economics of Feeding MIN-AD<sup>®</sup> to Finishing Cattle

### Impact of MIN-AD on Performance

MIN-AD has been used in finishing cattle rations for over 40 years. Currently, over 2.5 million cattle are fed MIN-AD on an annual basis. A total of nine research trials have been conducted evaluating its impact on finishing cattle performance. Most of these trials have been conducted by cattle feeding companies or feed companies at their own research facilities with the results only recently made available to the rest of the industry. The other trials were conducted by universities either at their own research facility or at cooperating commercial feedlots. A summary of these nine research trials evaluating MIN-AD in finishing cattle shows the following average impact on performance:

1. Dry Matter Intake Increased by 0.55%
2. Average Daily Gain Increased by 2.06%
3. Feed to Gain Decreased by 1.65%

The response was fairly consistent across all nine trials. Individual trial data are available upon request.

### Impact of Feeding MIN-AD on Profitability

The impact of these improvements on profitability can be significant, especially with high feed prices. The return on investment with MIN-AD is between 13 and 30 to 1, depending on the exact cost of adding MIN-AD to the supplement.

To illustrate, let's examine a typical feeding scenario as shown in the table below with feed costs at \$210 per ton of dry matter and a conversion rate of 6.25 pounds of feed for each pound of gain without MIN-AD. Obviously, a key factor is the cost of adding MIN-AD to the supplement. An analysis of both liquid and dry supplements using 2008-09 ingredient prices has shown an increase in supplement cost of \$2.00 to \$5.00 per ton to add MIN-AD at the recommended level (3-4 ounces per head per day). In the example below, \$5.00 per ton of supplement was used to show the impact of costs on the high end of the spectrum. With an inclusion level of 5% for the supplement, this only adds \$0.25 per ton to the cost of the final ration. In this comparison, 500 pounds of gain will be put on the cattle with or without MIN-AD.

Assuming that feed conversion will be improved by the average 1.65% reported in the nine trials conducted to date, the conversion with MIN-AD will be 6.15 pounds of feed per pound of gain. The net result is that it will take 52 (3125-3073) pounds less feed to put on the 500 pounds of gain. This results in a

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reduction of \$5.03 in feed costs for each animal. Alternatively, the profit per head will increase by \$5.03. And since it will only cost \$0.38 to feed MIN-AD for the entire feeding period, the return on investment is 13.1 to 1. Correspondingly, MIN-AD will reduce the cost of gain by \$0.01 per pound. If the cost of adding MIN-AD to the supplement is only \$2.00 per ton, the return on investment is 34.2 to 1.

If MIN-AD doesn't improve performance at all, the increase in cost-of-gain is only \$0.001 per pound because it costs so little to add it to the ration. In summary, there is very little downside risk and a sizable profit potential if MIN-AD gives the same response as it did in nine research trials.

### Assumptions and Economic Analysis

Summary of nine trials evaluating MIN-AD in finishing diets:

Increase in Dry Matter Intake = 0.55%  
 Increase in Average Daily Gain = 2.06%  
 Improvement in Feed Conversion of 1.65%

#### INPUTS:

Ration cost without MIN-AD (\$/Ton DM Basis):	\$210.00
Conversion without MIN-AD (F/G)	6.25
Improvement in conversion by MIN-AD (%)	1.65
Added Cost for MIN-AD per ton of Supplement (\$/ton)	\$5.00
Supplement inclusion level (%)	5.00
Ration cost with MIN-AD (\$/ton)	210.25
Conversion with MIN-AD (F/G)	6.15
Pounds of gain during finishing period	500

#### ECONOMIC ANALYSIS:

Pounds of Feed w/o MIN-AD	3125
Pounds of Feed with MIN-AD	3073
Total Feed Cost Without MIN-AD	\$328.13
Total Feed Cost With MIN-AD	\$323.10
Additional Profit Per Head	\$5.03
Return on Investment:	
Added cost of feeding MIN-AD per head	\$0.38
Return on Investment	13.1 to 1
Cost of gain w/o MIN-AD	0.656
Cost of gain with MIN-AD	0.646
Cost of gain with zero response	0.657

A spreadsheet designed to allow inputs for a specific situation is available upon request.