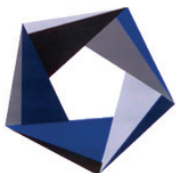


THE NEXT GREAT  
INNOVATION IN  
CATTLE FEEDING  
IS HERE!



**TRACER**  
MINERALS™

**I**n an effort to improve the health, well being, and overall profitability of the cattle feeding sector, Tracer Minerals has invested significant money for research to explore the differences between a “TRUE” Amino Acid Chelate mineral pack verse’s a competitors program.



Although it is uncommon to use a complete organic trace mineral from start to finish, we wanted to explore the opportunities available to producers by improving the trace mineral aspect of a feeding program.

### ***Results were remarkable and industry changing.***

The most extensive and comprehensive research study in the trace mineral nutrition arena for feedlot cattle in decades.

#### Trial Summary

- **612 head 4 weight cutting bulls**
- **Randomized in 20 pens approximately 30 head per pen**
- **Hereford TX area research facility**
- **Supplemental mineral delivered thru a micro machine**
- **Cattle orginated from same sale/buyer in the Sequin, Tx area**

Results were consistent with years of prior research on the use of Amino Acid chelated minerals in production animals.

### **Mineral Pack for Trial**

#### Amino Acid Chelated Minerals

- or -

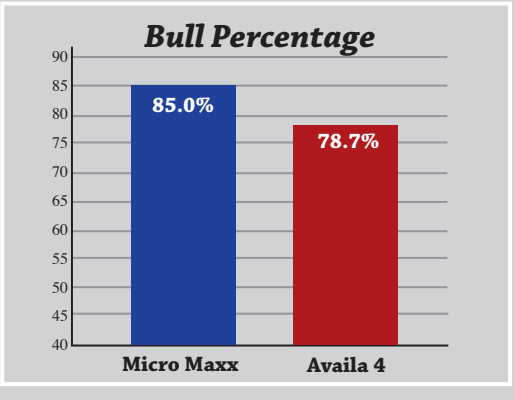
#### Complexed Minerals

- **170 mg Zinc Amino Acid Chelate**
- **70 mg Manganese Amino Acid Chelate**
- **170 mg Copper Amino Acid Chelate**
- **142 mg Magnesium Amino Acid Chelate**
- **142 mg Potassium Amino Acid Complex**

- **360 mg Zinc Amino Acid Complex**
- **202 mg Manganese Amino Acid Complex**
- **128 mg Copper Amino Acid Complex**
- **13 mg Cobalt Glucoheptonate**

*“You can trace every sickness, every disease and every ailment to a mineral deficiency.”*

Dr. Linus Pauling, Nobel Prize Winner

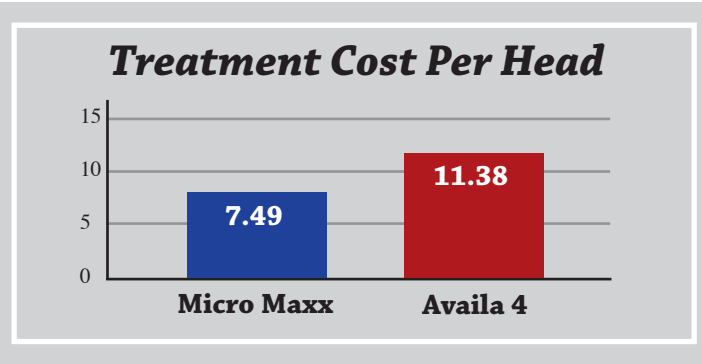
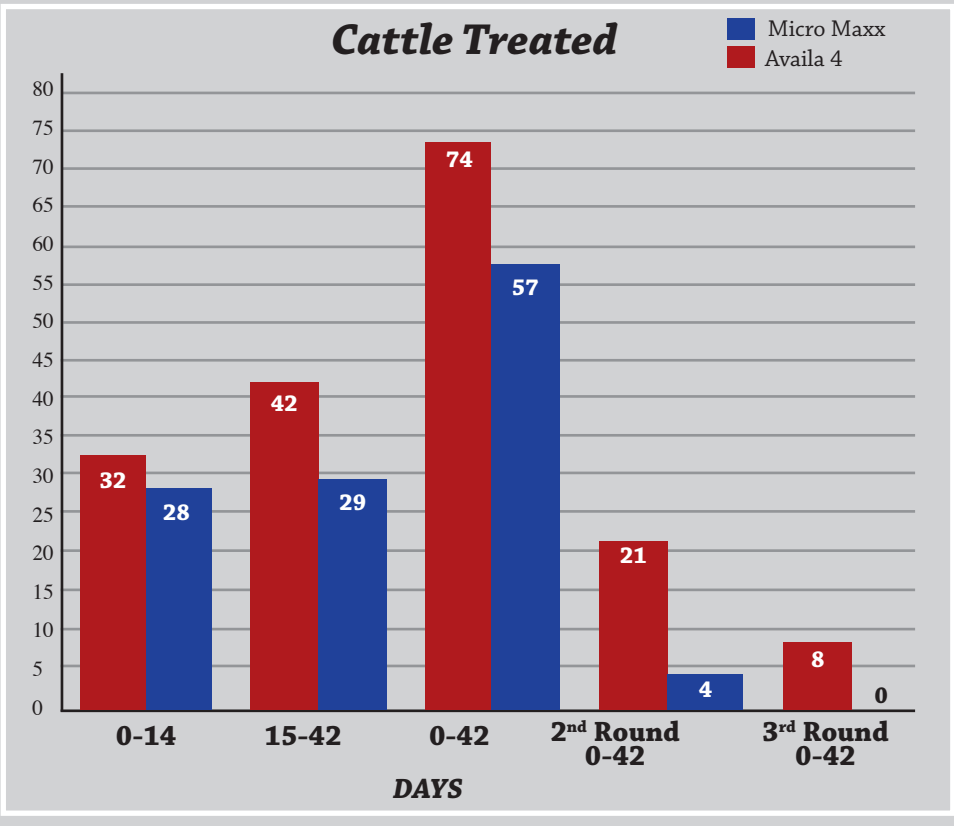


When randomized, the chelate group had 9% more bulls than the complex group. Despite this, chelates still out performed the complex fed cattle.

The chelate group realized more than a 30% reduction in 1<sup>st</sup> treatments.

There was more than a 500% reduction in 2<sup>nd</sup> treatments which was statistically significant. (P= .03)

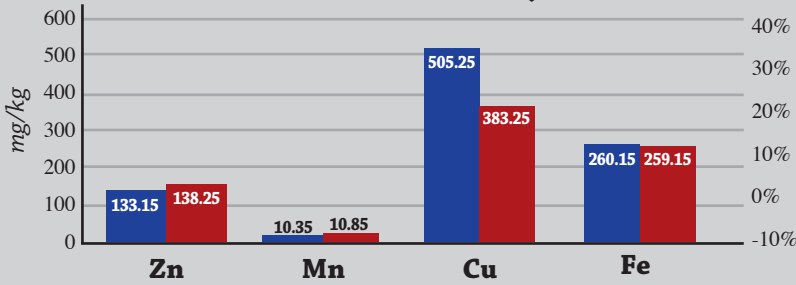
- Saved money on treatment cost
- Pull rates between day 0-14 was 13% reduction
- Pull rates between days 15-42 was 45% reduction.
- The longer the cattle received the mineral pack the larger difference realized in health.



Improvements in innate immunity resulted in cattle with a reduction in overall treatment cost of \$3.89 per head for the entire group.



## Mineral Assay

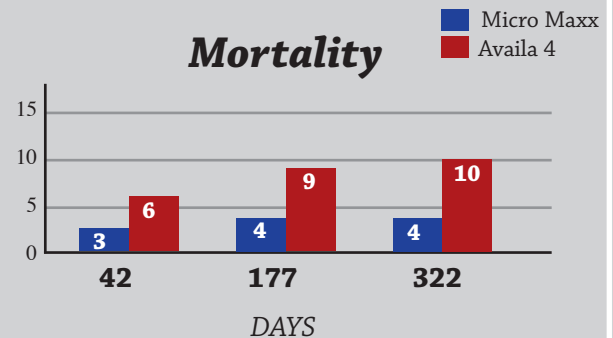


- Fed 52% less supplemental zinc in chelate group
- Fed 65% less supplemental manganese in chelate group
- Fed 32% more supplemental copper in chelate group

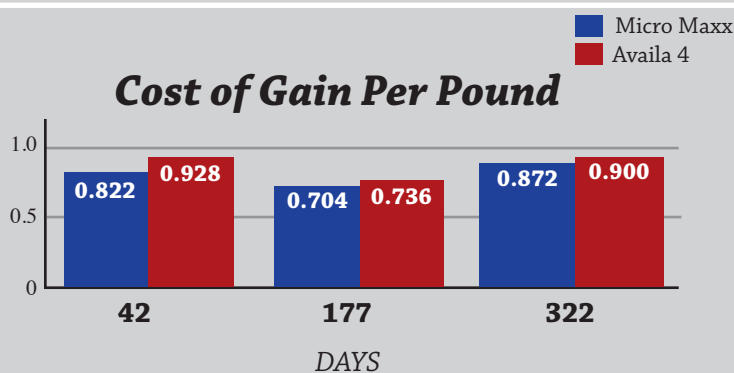
Micro Maxx	133.15	10.35	505.25	260.15
Availa 4	138.25	10.85	383.25	259.15
Difference	-3.8%	-4.80%	31.80%	0.40%

- Zero deaths occurred between day 0-14
- Day 42 – Chelate group had 50% less deaths
- Day 177 – Chelate group had 56% less deaths
- Trial End – Chelate group had 60% less deaths
- Chelate group better overall profit

## Mortality



## Cost of Gain Per Pound



Throughout the entire study the chelate group had better Cost of Gain than the complex group.

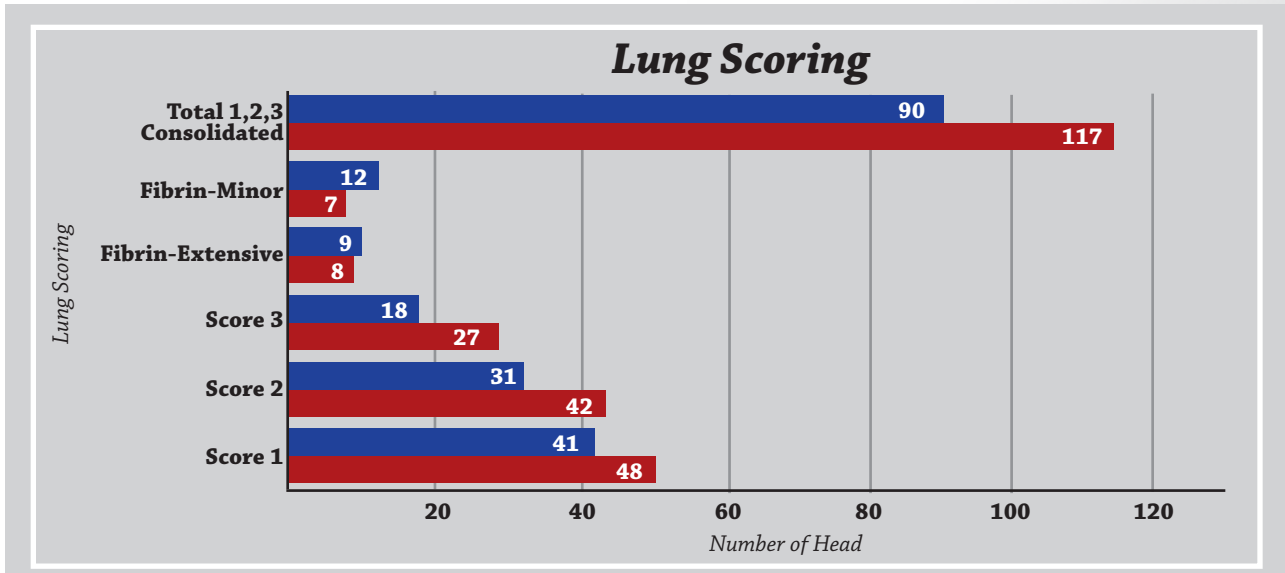
- **Healthier Cattle**
- **Improved animals well being**
- **3% overall improvement in Cost of Gain**
- **\$25.00 per head difference in overall profitability**

*“Real Amino Acid Chelates are one of the most important discoveries for the health and well being of cattle since the introduction of Ivomec™.”*

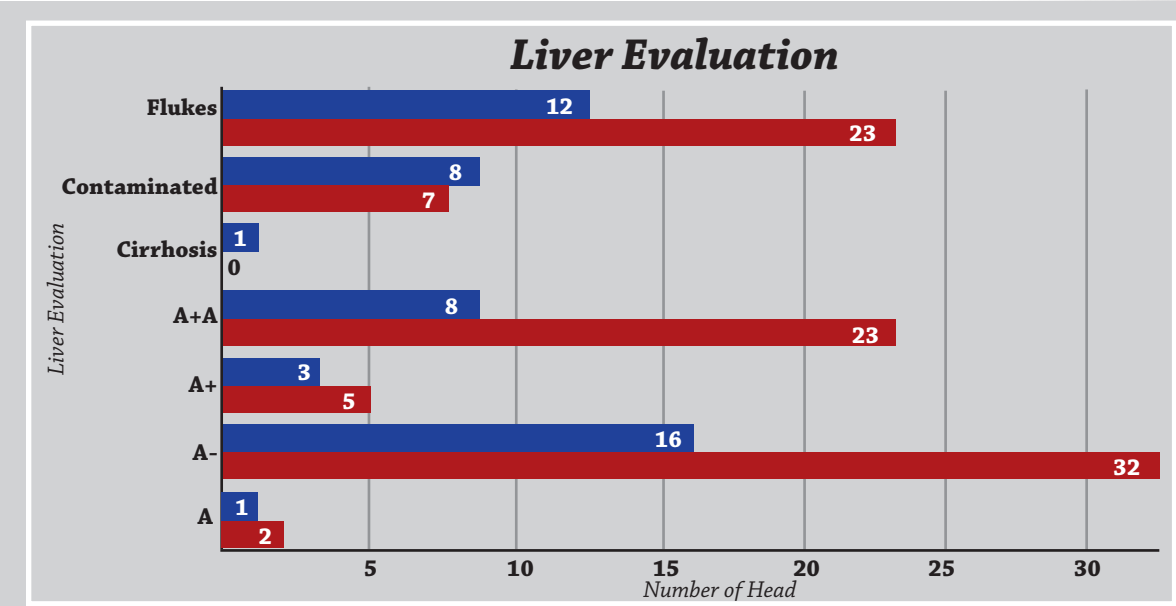
**A**t harvest there was a 30% reduction in lung lesions in the chelate group proving better overall health and ability to perform to their genetic potential.

*Animals can only perform and eat to their lung capacity.*

*Having healthier animals results in improved lung capacities and overall performance.*



Score Of	1	2	3	Fibrin-Extensive	Fibrin-Minor	Total 1,2,3 Consolidated
Micro Maxx	41	31	18	9	12	90
Availa 4	48	42	27	8	7	117



	A	A-	A+	A+AD	Cirrhosis	Contaminated	Flukes
Micro Maxx	1	16	3	8	1	8	12
Availa 4	2	32	5	23	0	7	23

**T**hroughout the trial, animals receiving the amino acid chelates were better able to respond to disease challenge treatment than the complex group.

- **86% Fewer Liver abscesses**
- **More Efficient**
- **Better Performance**

# Healthier Cattle

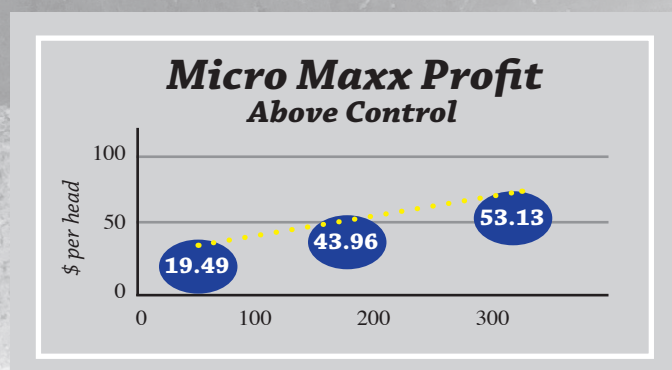
# More Profit

The results at the end of the trial proves that having small improvements in all these areas... improves profitability.

***True Amino Acid chelated minerals have a major impact in profitability and the well being of your cattle.***

**A**t the end of the day the results speak for themselves.

- Fewer cattle treated
- Fewer dead cattle
- Healthier liver
- Healthier Lungs
- Improved Cost of Gain
- Fewer Sickness Treatments
- Improved Bottom Line



• Ivomec is a registered trademark - Merial limited  
• Availa 4 is a registered trademark - Zinpro Corporation

[www.tracerminerals.com](http://www.tracerminerals.com)