The vet’s dilemma

when 70% of the calcium is actually precipitated out of solution with oxalic acid.

Research with calcium-bound milk or milk replacers indicates no reduced daily calcium excretion consuming the mixture. Gastric acid and enzymes, coupled with delayed abdominal emesis, demonstrated to exist, whether significant curd formation occurs or not, would then act on the caseinate proteins to assist in their further digestion in the small intestine. If the acidified mixture contained whey proteins as its source of proteins, abomasal clotting would be immaterial to proper digestion and utilization. Even a mixture of waste milk, whole milk and/or CMR could not negatively affect calves’ ability to hold caseinates within the abomasum for prolonged gastric digestive action.

References

Innovation in amino acid nutrition is changing how dairy cows are fed, improving production and performance. What’s changed? Research shows achieving optimal production requires more than rumen bypass. For example, lysine has little impact on a cow’s production if the lysine is not actually absorbed in her small intestine.

Bioavailable lysine, known as metabolizable lysine (MP lysine), is the amount of lysine passing through the rumen in a form that is available for absorption in the small intestine.

Higher levels of MP lysine provide a more efficient use of protein because the lysine is intestinally available to the cow.

One product delivers on rumen bypass and bioavailability: It’s also the most cost-effective MP lysine on the market, LysiPEARL™. Created with a proprietary spray freezing process, LysiPEARL maximizes potential milk production and profitability.

Figure 1. Comparing bioavailability of rumen-protected lysine products

Table 1. Summary of bioavailability

<table>
<thead>
<tr>
<th>Product</th>
<th>LysiPEARL™</th>
<th>Product A</th>
<th>Product C</th>
<th>Product B</th>
<th>Product D</th>
</tr>
</thead>
<tbody>
<tr>
<td>% lysine</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>% bioavailable lysine</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>% lysine in the small intestine</td>
<td>90%</td>
<td>90%</td>
<td>90%</td>
<td>90%</td>
<td>90%</td>
</tr>
</tbody>
</table>

Visit www.kemin.com/products/lysipearl for more information.

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