

## What's the true purpose of adding rumen buffers to the ration?

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Speculation exists that the reason buffers seem to help in high corn silage rations (even processed silage with longer chop to increase effective fiber) is the same reason cows on high (starch) corn silage rations seem to respond to (appropriate amounts of) finely ground concentrate sources.

Buffers serve to increase the liquid dilution turnover rates in the rumen more than acting as a rumen pH modifier. This would result in starch moving to the lower gut as a faster rate. Fine ground corn likely hydrates faster, sinks from the rumen mat and flows out of the rumen with the liquid phase. Both approaches (and they are likely additive) probably result in starch exiting the rumen faster, lowering rumen starch loads, reducing subclinical acidosis while at the same time allowing for intestinal digestion of starch to provide extra energy for milk production. There seems to be a limit to the SI ability to utilize starch. Also, coarse grinding of grain can present problems if the grain does not have the surface area to be digested in the upper SI and moves to the lower intestinal tract where there is a potential to fuel the growth of *Clostridium perfringens* Type A contributing to the Hemorrhagic Jejunal Syndrome many herds have experienced the last few years.

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