

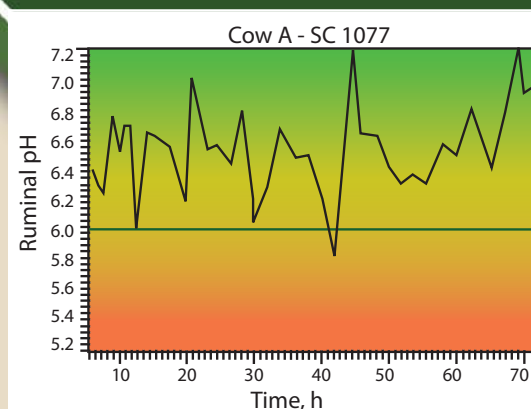
# University of Minnesota Stern, Linn, Bach & Thrune 2007



**Levucell<sup>®</sup> SC**  
Rumen Specific Yeast

In 2006, Dr Bach, from IRTA (Spain) presented a research project that showed the positive impact of Levucell SC - 1077 on ruminal pH (Control pH 5.49 versus treatment pH 6.05). The study involved the use of rumen pH datloggers in dairy cows that were fed a mid lactation diet. The results indicated that when cows were supplemented with Levucell SC, both the duration and severity of Sub Acute Ruminal Acidosis (SARA) was reduced.

A follow up to this study has been conducted at the University of Minnesota to determine the effects of Levucell SC supplementation on ruminal pH patterns and fermentation in late lactation conditions. Ruminal pH in eight fistulated Holstein dairy



cows was monitored through a 6 day control and 6 day treatment (Levucell SC) period. Throughout the trial period cows received once daily a basal diet consisting of 60% forage and 40% concentrate (DM basis), supplemented or not with Levucell SC. Ruminal pH was recorded continuously every 22 min for 6 days, using in dwelling pH data logger that was placed in the rumen.

*Cows fed*

*Levucell SC rumen specific yeast  
had elevated levels of rumen pH*

# ...improvement in rumen pH when feeding Levucell SC rumen specific yeast...

## Results:

Examples of the pH profiles of two cows on the study are shown. When Levucell SC was added to the diet, both Cow A and Cow B had a statistically significant increase in rumen pH.

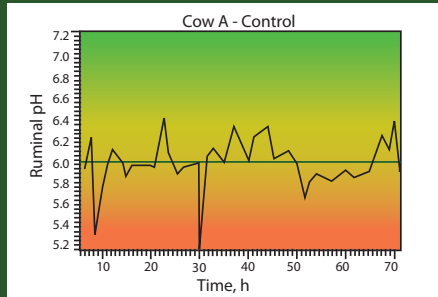
The results showed that mean ruminal pH, average maximum ruminal pH as well as average minimum ruminal pH were significantly higher with Levucell SC supplementation than in the Control group (Figure 1).

In addition, the amount of time the cows spent under the subacute acidosis threshold (pH < 5.6) was also significantly lower with Levucell SC supplementation (Table 1).

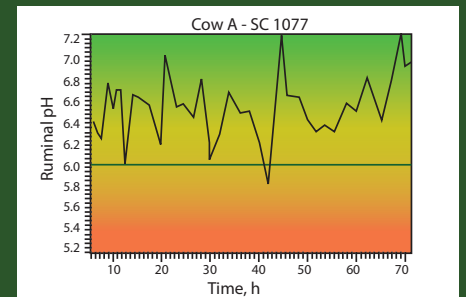
## Summary:

The University of Minnesota trial confirmed the benefit of Levucell SC on rumen conditions, even in late lactation diet conditions (average rumen pH= 6.32 for control, compared to 5.49 in the IRTA trial).

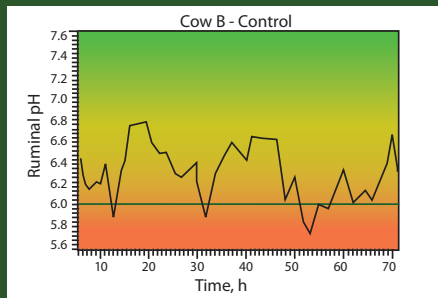
Trying to reduce the economic impact of acidosis is a challenge for all nutritionists, but these types of studies clearly indicate the positive role of Levucell SC in helping to maintain rumen health in a wide range of conditions.



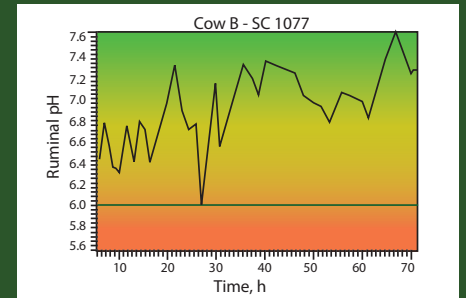
Average pH 5.95



Average pH 6.53



Average pH 6.28



Average pH 6.69

Figure 1: Effect of Levucell SC on rumen pH (mean, minimum and maximum)

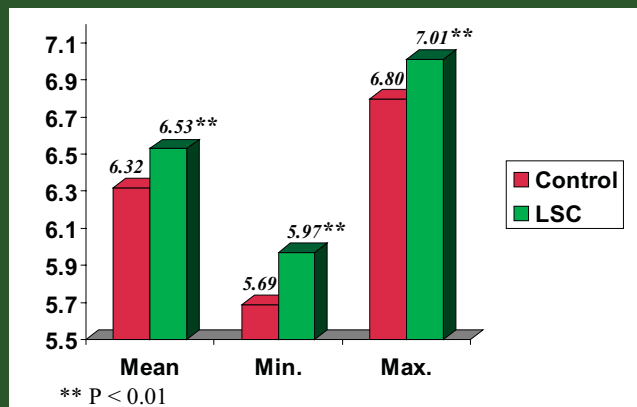


Table 1

	Control	Levucell SC
Time spent below pH 6.0 (h)	3.81 <sup>a</sup>	1.56 <sup>b</sup>
Time spent below pH 5.8 (h)	1.68 <sup>a</sup>	0.37 <sup>b</sup>
Time spent below pH 5.6 (h)	0.69 <sup>a</sup>	0.06 <sup>b</sup>

P<0.05