

R-Pro



Provimi patented technology that improves protein utilization in dairy cows by altering the rumen microbial population

Provimi companies in Europe have marketed this technology for several years.



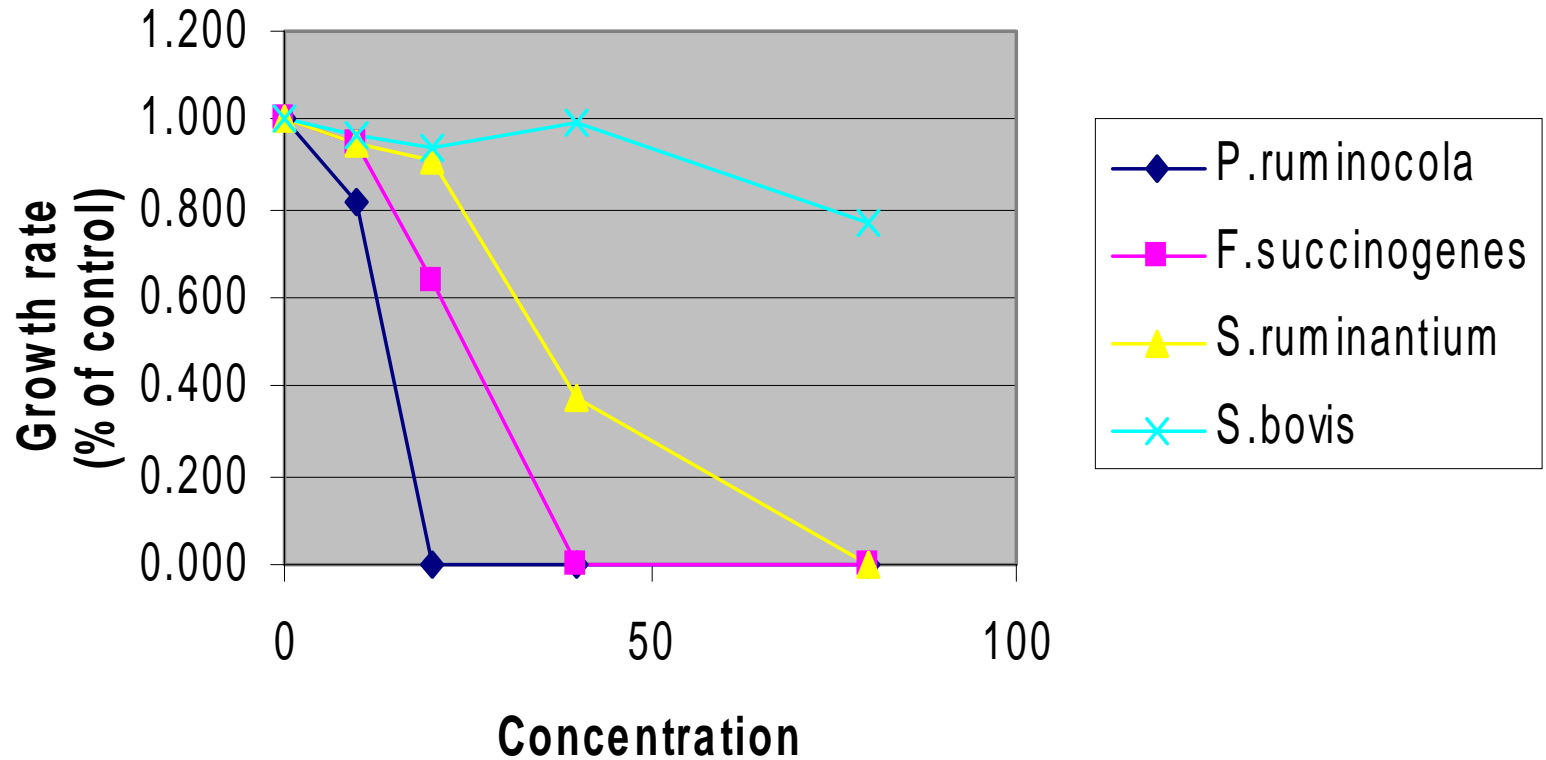
Technology: mode of action

Technology affects rumen microbial population and activity

- inhibit proteolytic bacteria
- reduce activity of proteolytic enzymes
- inhibit protozoa

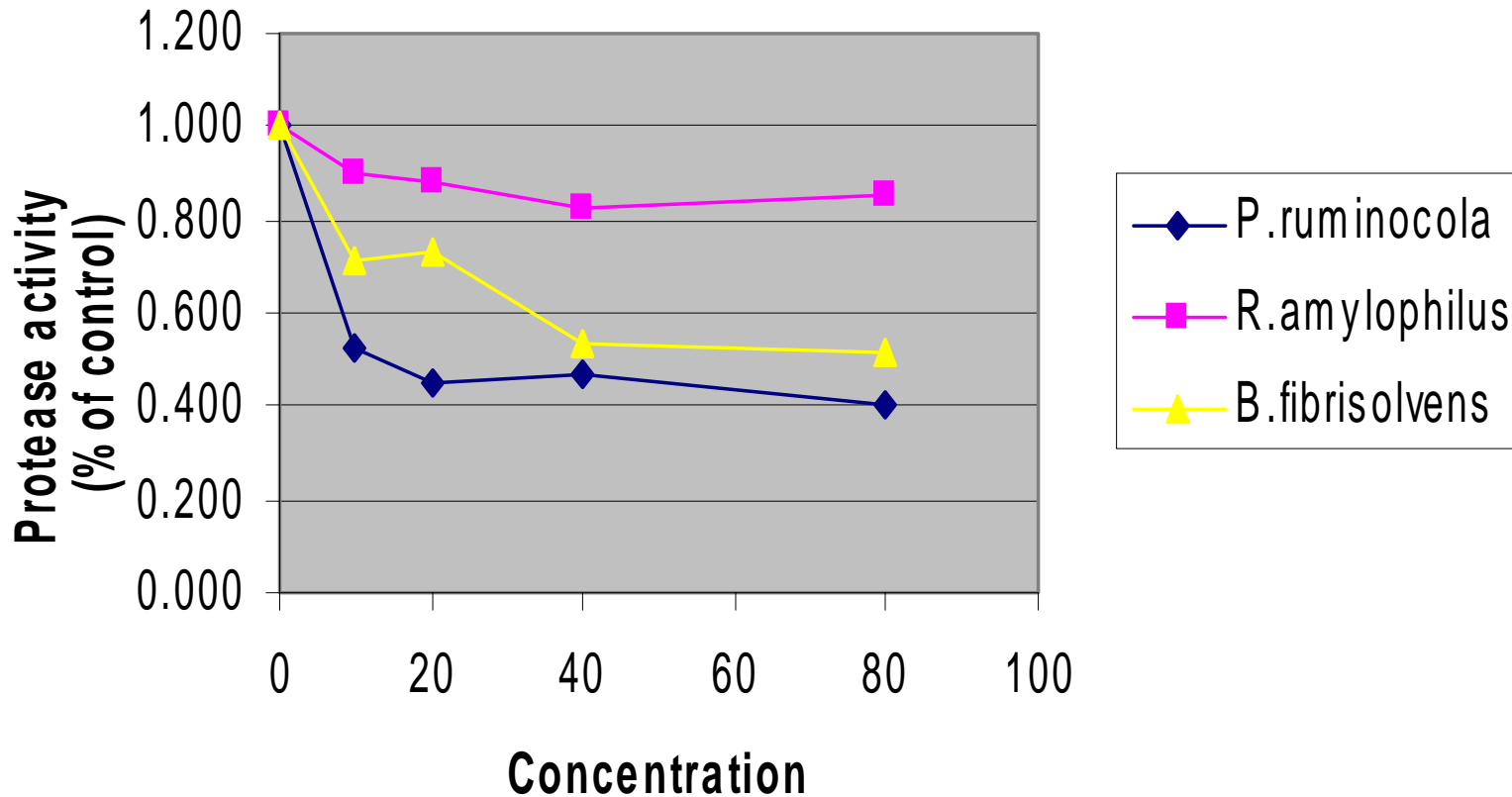


Effect of R-Pro on specific growth rate of bacteria





Effect of R-Pro on protease activity



R-Pro

Feeding Rate – 0.1 lbs/cow/day

Dry Matter – 97.6 %

Protein (Theoretical Value to use when balancing rations)

Crude – 465 %

Solubility – 14 %

RUP – 86 %

CPM Model – instead of using theoretical protein values, increase FC & NFC Bacteria Max Yield constants from 0.40 to 0.415.

R-Pro Guidelines

- Needs adequate soluble (>30%) and degradable protein (>60%)
- Adequate total and effective fiber
- Mix thoroughly

R-Pro

Two possible benefits

1) Reduce dietary protein

A) Reduce costs – generally 5-10 cents/cow

B) Improve “N” utilization – less excreted

2) Increase milk production/milk protein

- increase quantity & quality of metabolizable protein

On Farm Test Results

R-Pro replaced 0.5 lb CP from SBM and DDGS

		<u>Pre-test DHIA</u>				<u>On test DHIA</u>				
	No.	lb	%	%	lb	lb	%	%	lb	
Farm	Cows	milk	BF	CP	MLM	milk	BF	CP	MLM	
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1	90	66.7	3.80	3.21	69.0	66.4	4.04	3.09	71.0	*
2	96	92.5	3.78	2.97	95.0	93.1	3.75	3.03	96.0	**
3	95	93.0	3.71	3.07	106.0	87.1	4.02	3.10	105.0	
*	Lost 4-5 lb milk after going off the test, also noticed less ammonia smell and more consistent manure while on test									
**	initially had an increase in milk but changed forages and production dropped back down by time of DHIA testing.									