

P106 Effect of soybean protein in milk replacers for calves. A.G. Silva*, J.T. Huber, F. Deresz, and R.M. DeGregorio. Michigan State University, East Lansing.

Twenty-four Male Holstein calves (8/treatment) were fed milk replacers (14% solids) containing 19% crude protein from a) 100% milk protein (MP); b) 66% modified soy protein + 34% MP (MS); c) 66% heated soy flour + 34% MP (SF) as the only nutrients at 8, 9, 10, 11, 12, 12 and 12% body weight from 0 to 7 wk of age. A xylose absorption test was performed on d 51 by oral administration of .5 g xylose/kg BW in a 10% water solution. Also, a xylose disappearance test was performed on d 44 by IV injection of .25 g xylose/kg BW in 20% water solution. Jugular blood was sampled at 30 to 60 min intervals for 6 h after feeding or injecting xylose. Milk protein resulted in better gain ($P<.05$) and feed efficiency ($P<.05$) than soy proteins. No differences in scours score or daily rectal temperature were noted. Digestibility and plasma xylose results were as follows:

Ration	Digestibility at 5 wk (%)				N retention, g/day	Mean plasma xylose (mg/100 ml)	
	OM	CP	EE	NFE		Oral	Injected
MP (100% CP)	90.7 ^a	82.5 ^a	94.1 ^a	92.9	49.3 ^a	31.5 ^a	32.5 ^a
MS (66% CP)	87.2 ^b	72.1 ^b	92.2 ^{ab}	91.2	33.6 ^b	26.5 ^b	30.0 ^b
SF (66% CP)	85.3 ^b	64.1 ^c	91.4 ^b	90.8	28.2 ^b	26.5 ^b	29.3 ^b

^{abc}Means with different subscripts are different ($P<.05$).

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