



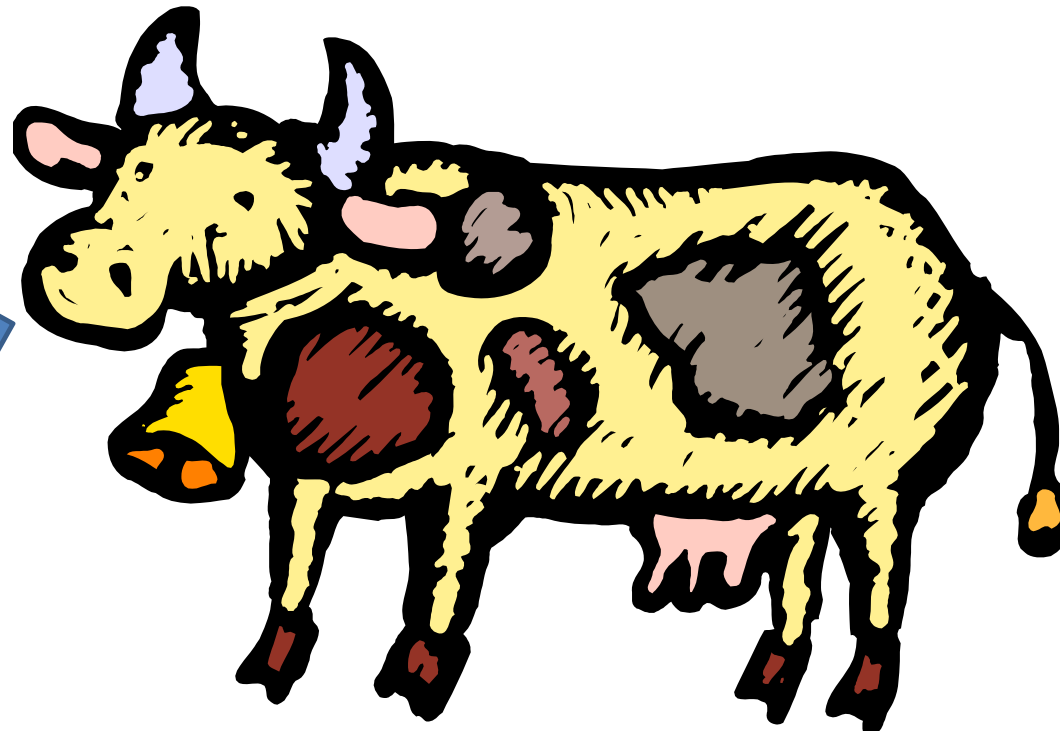
Pasture Intake and Residual Feed Intake in Dairy Cows

S.A. Hamilton, M. Kerley and R.L. Kallenbach

University of Missouri Extension and Animal and Plant Science Divisions

- Can we select for it?
 - Gene Markers??
- What is real pasture intake?
 - Drives management decisions

3.7# grain/feeding w/ 0.5% titanium dioxide



Pasture offered at 3-5X
Natural Lipid (Alkane C29)

Manure Collection

% titanium dioxide determines total fecal output
% Alkane C29 determines forage digestibility
Fecal output/Digestibility = Dry Matter Intake

Cow	Pasture Intake	Total Intake	% Body Wt.	Milk/Day	Lactation
485	13.2	20.5	2.1%	33.7	9598
500	13.5	20.8	2.9%	27.0	7245
494	14.2	21.6	2.2%	27.0	6787
502	14.7	22.0	2.5%	32.0	11685
473	16.3	23.7	3.1%	28.3	8111
499	17.1	24.4	3.1%	23.3	6577
503	17.6	25.0	3.3%	32.7	9061
489	17.8	25.2	3.4%	27.9	7520
492	19.1	26.4	2.4%	31.0	8195
487	20.1	27.5	3.8%	30.0	9772
471	20.2	27.5	2.7%	37.4	8746
486	20.5	27.9	3.3%	36.8	9119
491	20.7	28.0	3.1%	40.1	11081
496	21.0	28.4	3.8%	32.7	9219
497	21.2	28.6	3.6%	37.4	10543
488	21.5	28.8	4.0%	38.2	10517
501	21.5	28.9	2.9%	33.5	9243
479	21.9	29.3	3.1%	47.7	11248
472	22.1	29.5	3.0%	38.5	10487
493	22.2	29.5	2.9%	46.5	13255
504	23.0	30.4	3.5%	35.9	11146
483	23.2	30.5	3.2%	35.0	8616
495	24.1	31.4	3.6%	36.4	9744
477	25.2	32.6	4.0%	41.5	11395
475	26.8	34.1	3.5%	45.0	14362

Summary of June Data

	Total Intake	Pasture Intake	% Body Wt.	Milk/Day	4%FCM	RFI	Milk to Feed Ratio	Weight
Low RFI	26.9	19.6	3.05%	37.6	35.4	-0.92	1.32	881
Mid RFI	28.7	21.4	3.11%	35.4	33.8	-0.04	1.18	922
High RFI	26.1	18.7	3.17%	32.0	30.5	0.78	1.17	821

Summary of Preliminary Data

- Too soon to make any judgments
- Pasture intake around 2.2% of body weight
 - Substitution rate of grain impacting?
 - “Ballpark” number for stocking rate
 - “Ballpark” number for allocation
- Genetic marker search with more data and diversification
- Appears some relationship between RFI and milk to feed ratio