

T214 Ruminal and intestinal digestibility of distiller's grains with solubles varies by source. D. H. Kleinschmit, J. M. Ladd*, D. J. Schingoethe, K. F. Kalscheur, and A. R. Hippen, *South Dakota State University, Brookings.*

Two ruminally cannulated Holstein cows (263 DIM) producing 32 kg/d of milk were used to determine the ruminal degradability of DM and CP in soybean meal (SBM), dried distillers grains with solubles (DGS) from five sources (A, B, C, D, and E) and one source of wet DGS (W). Feeds were incubated in the rumen for 3, 6, 12, 18, 24, and 36 h on three consecutive days. Intestinal CP digestibility was measured on feeds at 12 h. The MIXED procedure of SAS was performed and the statistical model was $y = \text{treatment} + \text{cow} + \text{time} + \text{day} + \text{time} \times \text{treatment}$ with cow being random. Other interactions were not significant. Significance was declared at $P < 0.05$. Ruminal DM and CP degradation rates were greater in SBM compared with DGS. W had a greater ruminal DM degradation rate compared with A, B, and D and a greater ruminal rate of CP degradation compared with A, B, C, and D, but not E. The rates of NDF digestibility among DGS ranged from 0.0253 to 0.0315/h. Ruminal undegradability of DM (RUDM) was less in SBM compared with DGS. A and D had more RUDM compared with B, C, and E and W. In addition B was greater for RUDM compared with W. Ruminally undegradable protein (RUP) for SBM was less than for DGS. W had less RUP than in dried DGS. The RUP of C and E was lower than in A, B, and D with A having more RUP than B and D. Intestinal digestibility (ID) of SBM was greater than in all DGS. B and C had greater ID compared with A, D, and E. The ID in W was similar to all other DGS, except for A, which was lower. In conclusion, the RUP in SBM was lower than in DGS. Wet DGS had less RUP than dried DGS, but among the dried DGS, RUP varied considerably. Processing differences between ethanol plants may significantly affect DGS quality.

Treatment	SBM	A	B	C	D	E	W
Ruminal DM degradation/h	0.0858 ^a	0.0209 ^c	0.0237 ^c	0.0261 ^{bc}	0.0232 ^c	0.0274 ^{bc}	0.0334 ^b
Ruminal CP degradation/h	0.0852 ^a	0.0134 ^c	0.186 ^c	0.0214 ^c	0.0161 ^c	0.0256 ^{bc}	0.0340 ^b
RUDM, %	29.4 ^d	57.0 ^a	53.8 ^b	52.0 ^{bc}	56.6 ^a	51.1 ^{bc}	50.8 ^c
RUP, %	38.9 ^e	78.0 ^a	67.8 ^b	63.6 ^c	71.0 ^b	63.5 ^c	56.5 ^d
ID, %	87.5 ^a	62.5 ^d	77.4 ^b	77.4 ^b	66.1 ^{cd}	65.9 ^{cd}	71.7 ^{bc}

^{a,b,c,d,e}Means in rows with unlike superscripts differ ($P < 0.05$).

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