

ABSTRACTS
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20 Daily vs. alternate day supplementation of soybean meal or wheat middlings to steers consuming low quality hay. T. R. Shirley^{*1}, C. J. Ackerman¹, G. D. Pulsipher², T. DelCurto², C. S. Schauer³, and T. R. Currier³, ¹*Oregon State University, Corvallis OR*, ^{2,3}*Eastern Oregon Agricultural Research Center, ²Union, ³Burns, OR.*

The objectives of this trial were to investigate the impacts of daily vs. alternate day (AD) supplementation of soybean meal (SBM) or wheat middlings (WM) on forage DMI, total tract digestibility, and ADG of steers consuming low quality hay. Exp. 1; five Angus x Hereford steers (403 32 kg) fitted with rumen cannulas were utilized in a 5 x 5 Latin Square design. Steers were individually fed low-quality (5.5% CP) fescue hay ad libitum and were randomly assigned to one of five treatments: no supplement (CON); WM fed daily (WMD); WM fed AD (WMAD); SBM fed daily (SBMD); and SBM fed AD (SBMAD). Supplements were formulated to meet 100% of degradable intake protein (DIP) and metabolizable protein (MP) requirements (level 1 NRC; 1996). Supplementation increased ($P < 0.05$) hay and total DMI ($\text{g}\cdot\text{kg}^{-1}\cdot\text{BW}^{-1}$) and DM digestibility (%) compared to CON. Daily supplementation increased ($P < 0.05$) hay and total DMI ($\text{g}\cdot\text{kg}^{-1}\cdot\text{BW}^{-1}$) and DM digestibility (%) when compared to AD supplementation. Hay DMI ($\text{g}\cdot\text{kg}^{-1}\cdot\text{BW}^{-1}$) was greater ($P < 0.01$) for SBMD compared to WMD, but total DMI ($\text{g}\cdot\text{kg}^{-1}\cdot\text{BW}^{-1}$) and DM digestibility (%) were not different ($P > 0.68$). Hay DMI ($\text{g}\cdot\text{kg}^{-1}\cdot\text{BW}^{-1}$) was greater ($P < 0.01$) for SBMAD compared to WMAD, but total DMI ($\text{g}\cdot\text{kg}^{-1}\cdot\text{BW}^{-1}$) and DM digestibility (%) were not different ($P > 0.75$). Exp. 2; 96 Angus x Hereford steers (280 32 kg) were blocked by weight (three groups) into 12 pens in a randomized complete block design. Steers were fed low-quality (6.5% CP) fescue hay ad libitum, and one of four supplements formulated to meet 100% of the DIP requirements (level 1 NRC; 1996): WM fed daily (WMD); WM fed 3d/week (WMAD); SBM fed daily (SBMD); and SBM fed 3d/week (SBMAD). Hay DMI ($\text{g}\cdot\text{kg}^{-1}\cdot\text{BW}^{-1}$) decreased ($P < 0.01$) and ADG increased ($P < 0.01$) for WM compared to SBM. Daily supplementation increased ($P < 0.03$) ADG and hay DMI ($\text{g}\cdot\text{kg}^{-1}\cdot\text{BW}^{-1}$) compared to AD supplementation.

Key Words: Supplementation, Supplement Frequency, And Low Quality