A comparison of bite-count derived botanical composition of diet and clipping vs. rumen evacuation as techniques to estimate diet quality with grazing beef cattle. D. Damiran*[1], S. Findhold[2], T. DelCurto[1], and B.K. Johnson[2]. *[1]Eastern Oregon Agricultural Research Center, Oregon State University, Union, OR, and [2]Oregon Department of Fish and Wildlife, La Grande, OR.*

A study was conducted comparing the bite-count method (BC) of estimating forage intake, diet composition, and synthesized diet quality to direct estimates of diet quality using rumen evacuation (RE) techniques. Four sites, in secondary successional grand fir (*Abies grandis*) zones, were chosen as experimental pastures. Each pasture, in turn, contained two 0.25 ha enclosures that were either: 1) ungrazed (avg 890 to 1332 kg/ha) or 2) grazed by cattle in mid- June and mid-July to remove no more than 40% of total forage yield (avg 833 to 970 kg/ha). Four ruminally-cannulated steers were used to evaluate both techniques to determine diet quality obtained during the first three weeks of August. Diet collections and bite-count data were obtained in concurrent sampling regimes consisting of four 20 min grazing bouts per location and pasture. Degree of utilization (DU) in grazed enclosures was 32.85 ± 4.63%. Average RE OM intake (RE-OMI) was 357 ± 35.6 and 260.8 ± 35.4 g/20 min in grazed and ungrazed enclosures, respectively. In contrast, BC OM intake (BC-OMI) was 174.8± 16.9 and 373 ± 44.2 g/20 min in grazed and ungrazed enclosures, respectively, suggesting some problems in estimating bite size in previously grazed pastures. The RE-OMI estimate was 2-fold greater than the BC-OMI estimate ($P < .05$) in previously grazed pastures. Crude protein in RE samples averaged 10.2 ± 0.4 %, whereas, CP for the BC method was lower averaging 7.5 ± 0.3 % across pastures ($P < .05$). RE ADF and NDF were higher ($P < .01$) than BC ADF and NDF. However, RE and BC *in vitro* OM digestibility did not differ ($P > .10$) averaging 65.4 and 66.3 for RE and BC methods, respectively. In summary, BC methods tended to underestimate CP, and fibrous constituents presumably due to our inability to estimate bite size and composition accurately.

Key Words: Beef Cattle, Diet Quality, Bite Count