

In 1975 Corriedale lambs, av. wt. 23 kg, were fed on *S. almum* (containing 0.14% S and 0.01 % Na) + 1.2 or 1.6 g S/day + 0 or 2.3 g Na/day + 0 or 1.95 g K/day. Another group were fed on Kikuyu grass/Bermuda grass + 0 or 2.3 g Na/day + 0 or 1.95 g K/day for 10 wk. Lambs given Na supplement gave an increased liveweight gain of 63% over those receiving no Na. Liveweight gain and wool growth were unaffected by S supplement. Liveweight gain was negatively related to CN potential of *S. almum* and the herbage CF content. The significance of the relationship to breeding programmes for forage sorghum is discussed.