

Abstract

The effects of weeding regimes on maize and edible weed forage were evaluated for three seasons during 2001-03 in the Central Highlands of Kenya. Weeding regimes were weed free (W1), weedy (W2), pre-emergence herbicide (alachlor 48 EC at 1.2 kg a.i./ha and linuron at 0.6 kg a.i./ha; W3) and hand weeding twice (W4). Edible weeds had a dry matter digestibility of 65% and 19.9% crude protein (CP). The weedy regime (W2) reduced CP in maize stover and thinnings but increased the CP in edible weeds. Total weed biomass was higher in W4 than in W3. The residual effects of applying the weeding regimes were quantified in the third season when all plots were weeded by hand. Fourteen days after crop emergence (DAE), W1, W3 and W4 had low weed biomass whereas the W2 regime had the highest weed biomass (266.5 kg/ha). At 42 DAE, W2 again had the highest weed biomass (9.14 kg/ha) compared to 3.24 and 3.32 kg/ha for W1 and W4, respectively. The weedy regime (W2) used more man-days and was thus more expensive (81.1 man-days/ha) than W1 (67.2 man-days/ha), W3 (62.8 man-days/ha) and W4 (62.5 man-days/ha), which were similar. Although weeds provide a measurable source of forage, they directly reduce grain yield and the quality and quantity of maize forage. Failure to control weeds also results in more labour being needed to hand-weed subsequent crops.