ABSTRACT
An on-farm study to determine the maize yield response to farmer and researcher recommended weeding practices was undertaken in Matapwata Extension Planning Area, Blantyre/Shire Highlands, in Southern Malawi. Twelve farmers from two villages were randomly selected. Four plots were established at each farmer’s site comprising two fertilizers and weeding regimes, respectively. A maize-bean-pigeon pea intercrop was planted. Farmers identified Eleusine indica, (L.) Gaertn., Panicum maximum, Jacq. and Bidens pilosa L., as the commonest weeds while the first two species, and Cynodon dactylon, (L.) Pers. as the most ‘troublesome’. The number of days that farmers took from planting to first weeding did not significantly (P<0.05) differ between farmer weeding time (mean = 20±0.4 days) and researcher weeding time (mean= 19±0.4 days). However, the number of days from planting to second weeding significantly differed between farmer weeding (mean = 51±0.8 days) and researcher weeding (mean=42±0.8 days). Mean maize yield ranged from 1308 kg/ha on unfertilized farmer-weeded plots to 2342 kg/ha on fertilized researcher-weeded plots. A week’s delay in first weeding caused about 800 kg/ha (34%) losses in maize yield. At second weeding, plots weeded or earthed-up by 6 weeks after planting gave significantly (P<0.05) higher maize yield than those weeded beyond this date. Fertilizer increased maize grain yield by 772 kg/ha (59%) with a 1015 kg/ha (77%) yield increase recorded on researcher-weeded plots and only 530 kg/ha (41%) yield increase achieved on farmer weeded plots. The highest net returns to labour and fertilizer were realized from weeding according to current research recommendations compared to farmers’ weeding practice. Potential still exists to improve crop yield by adherence to research recommendations for weeding and application of fertilizer.

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