Abstract

Bambara Groundnut though cultivated majorly by women, remains a crop of high value to some local communities. Field trials were conducted in the rainy seasons of 2010 and 2011 to assess the effect of weed control methods on the yield and profitability of bambara groundnut (*Vigna subterranean* (L.) Verdc) at Sabon Gari in the Northern Guinea Savannah of Borno State, Nigeria. The experiment was made up of eight treatments (weedy check, pendimenthalin only, pendimenthalin followed by one hoe weeding, butachlor only, butachlor followed by one hoe weeding, hoe weeding once, hoe weeding twice and hoe weeding thrice) all arranged in a randomized complete block design (RCBD) and replicated three times. The weedy check and the plots that were treated with pendimenthalin only supported statistically similar weed dry matter in both years, which was significantly higher than the other treatments. In 2010, all the hoe weeded plots produced significantly grain yields than the weedy check and the herbicide treated plots except pendimenthalin followed by hoe weeding once. None of the herbicide treatments out-yielded the weedy check. In 2011, however, all the hoe weeding once and hoe weeding twice treatments out-yielded the hoe weeding trice treatment, although the difference was not significant. The result shows that bambara groundnut production was profitable in the two years of the study. The mean of the two years experiment shows that pendimenthalin followed by one hoe weeding had the highest net benefit of N60,875, while the least was recorded by butachlor followed by one hoe weeding (N17,494). The mean MRR indicate that hoe weeding once recorded 1.56 as the highest while the least was observed in hoe weeding thrice (0.42). It was therefore recommended that the weeds management methods be tried in larger field for economic impact, the application of pendimenthalin herbicide followed by one hoe weeding be studied further on bambara groundnut weeding practices.

**Keywords:** Economic, Assessment, Weeds, Methods, Bambara groundnut, Savanna, Nigeria.