ABSTRACT
In an experiment conducted at the Agricultural College Farm, Raichur on deep black clay soil during late Kharif season of 2002-03 on sustaining castor productivity by relative use of green manure and nitrogen levels. The results showed that, green leaf manuring of sunnhemp recorded significantly higher seed yield (10.23 q ha\(^{-1}\)), seed weight per plant (62.78 g), number of spikes per plant (8.46), dry matter accumulation in reproductive parts (40.70 g plant\(^{-1}\)), dry matter accumulation in stem (87.19 g Plant\(^{-1}\)) and leaf area (85.82 dm\(^{2}\) plant\(^{-1}\)) over the sole castor without green manuring and castor with in situ green manuring. Among the nitrogen levels, application of 80 kg N ha\(^{-1}\) produced significantly higher seed yield (10.09 q ha\(^{-1}\)), seed weight per plant (59.20 g), number of spikes per plant (7.93), dry matter accumulation in reproductive parts (38.82 g plant\(^{-1}\)), dry matter accumulation in stem (83.91 g plant\(^{-1}\)) and leaf area (90.58 dm\(^{2}\) plant\(^{-1}\)) over the control, application of 20 kg N ha\(^{-1}\) and 40 kg N ha\(^{-1}\). However, it remained at par with the application of 60 kg N ha\(^{-1}\) (10.07 q ha\(^{-1}\), 58.57 g plant\(^{-1}\), 7.73, 38.51 g plant\(^{-1}\), 83.57 g plant\(^{-1}\) and 90.26 dm\(^{2}\) plant\(^{-1}\) of seed yield, seed weight per plant, number of spikes per plant, dry matter accumulation in reproductive parts, dry matter accumulation in stem and leaf area, respectively).