

Effect of Organic Manure, Calcium and Weeding Regime on Growth and Yield of Peanut (*Arachis hypogaea* L.) in the Guinea Savannah Zone of Ghana

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Field experiments were conducted at the CSIR-Savanna Agricultural Research Institute (SARI) research station during 2015 and 2016 to determine the effects of organic manure, calcium, and weeding regimes and their interactions on growth and yield of peanut. The 2 x 4 x 3 factorial experiment was placed in a randomized complete block design with four replications. Pod number per plant was increased by application of 1.2 ton/ha organic manure (OM) plus hand weeding (HW) at 3 and 6 weeks after planting (WAP). Similarly, calcium at 188 kg/ha plus 1.2 ton/ha OM increased the number of pods. Glyphosate at 1.4 kg a.i./ha used as pre-plant herbicide combined with pendimethalin at 1.3 kg a.i./ha applied preemergence plus HW at 6 WAP or HW at 3 and 6 WAP lowered weed biomass and weed density. The synergy of OM and calcium (563 kg/ha) and the combination of this rate of calcium and glyphosate plus pendimethalin along with one supplementary HW resulted in the greatest pod yield (2,060 kg/ha and 2,120 kg/ha for these respective treatments). Maximum haulm yield of 4,320 kg/ha was attained with 1.2 ton/ha of OM plus 2 HW at 3 and 6 WAP. The most dominant weeds in the experiment were *Ageratum conyzoides* L and *Commelina benghalensis* L.