

## **Effects of Cacao – Pod Compost with and without Starter N and P on the Growth and yield of Soybean in an Ultisol**

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### **Abstract**

*A pot experiment was carried out in the greenhouse at Obafemi Awolowo University Ile-Ife, Nigeria, to assess the effects of composted cacao pod (at the rates of 0, 2.5 and 5 t/ha, respectively) with and without starter N (25 kg/ha as urea) and P (26 kg/ha as SSP) on the growth and seed yield of soybeans planted on an ultisol. The experiment, comprising two set-ups, lasted 8 weeks (for the growth assessment) and 12 weeks (for the yield assessment). The residual effects of the treatments in each set-up were also assessed. Results from the first set-up showed that starter N and P significantly ( $p < 0.05$ ) enhanced soybean heights over the control as well as over the 5.0 t/ha cacao pod containing N and P. The treatments, however, had no significant effect on growth parameters such as number of leaves per plant, shoot dry weight and root dry weight. In the residual study, the highest residual effect was realized on number of leaves and shoot dry weight when 5.0 t/ha cacao pod compost was applied, while the least were produced in the control. In the second set-up, only the residual effect of 5.0 t/ha cacao pod compost + starter N and P, was significant on soybean yield parameters (number of pods, and pod and seed weight). The findings from this study showed that both sole (cacao pod compost only) and complementary (cacao-pod compost + starter N and P) applications of these amendments at 5.0 t/ha significantly enhanced both the growth and the yield of soybean.*

Key words: cacao-pod compost, ultisol, starter N and P

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**Received: 2012/02/02**

**Accepted: 2012/02/29**