

The Effect of Organic Matter Sources and Nitrogen Fertilizer Doses on Growth of Robusta Coffee in East Java, Indonesia

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SUMMARY

An experiment to study the effect of organic matter sources and nitrogen fertilizer doses on growth of robusta coffee had been conducted in Kaliwining Experimental Station of the Indonesian Coffee and Cocoa Research Institute, Jember, East Java, Indonesia. The experiment was arranged in randomized complete block, split plot design with three blocks. The main plot was organic matter sources, i.e. control (no organic matter added), farmyard manure (20 kg of air dried per tree per year), *Calopogonium caeruleum* (planted inter rows of coffee and its leaves as well as its stem were used as mulch), and *Vetiveria zizanioides* (planted inter rows of coffee and its stem was used as mulch). The sub plot was nitrogen fertilizer dose, i.e. no nitrogen, a half of recommendation dose, and full of recommendation dose. The results on 2nd year after transplanting showed that the number of productive nodes of farmyard manure and vetiver grass treatments were higher than that of *C. caeruleum* treatment, but all of treatments were not significantly different to control. There was no effect of organic matter sources on water saturation deficit of coffee leaves in dry season; as well as on moisture, C-, and N-content of soil; although those values of cover crop treatments tended to be higher than the other two treatments. Nitrogen fertilization is still needed for better growth although high N content organic matter has been added.