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Crotalaria juncea green manure biomass and seed yield as affected by planting density and apical cutting in an organic system

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Research was conducted in Lajas, Puerto Rico, to quantify the effect of time of apical cutting and planting density on the shoot biomass yield at the flowering stage and the seed yield of the cover crop/green manure plant *Crotalaria juncea* managed organically. Seeds of *C. juncea* were sown at the densities of 11.4, 28.5, 45.6 kg/ha (10, 25 and 40 lbs/acre, respectively), The top 2.5-5 cm of the plants were removed at 3, 4, or 5 weeks after plant emergence, or not removed at all (check treatment). In sample plants, shoot biomass was determined at flowering, the stage deemed as the latest at which *C. juncea* plants should be used for green manure. In other plants, seed yield was assessed. There was a tendency for increasing shoot biomass at flowering as the stand density of *C. juncea* increased and the tops of the plants were not removed. When the tops of the shoots were removed, pruning tended to reduce accumulation of biomass at the flowering stage, more so at the highest stand densities. In planting densities of 10 and 25 lbs/acre, seed yield tended to increase as top removal was performed later in the season, while at the 40 lbs/acre density, seed yield tended to decrease as top removals were done later in the season. Under these conditions, from the yield and economy point of view, planting at 25 lbs/acre and not performing top removal may be best for growers.

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