Plant population affects growth and yield of okra (*Abelmoschus esculentus*)

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Okra is commonly grown as a direct-seeded crop at high plant populations in the Homestead area of south Florida, US. Soils of this region are shallow and calcareous. Seeds are planted in rows spaced 91 cm (36 inches) apart and as close as 5 cm (2 inches) apart within rows. The use of inexpensive open-pollinated cultivars makes possible plant populations of 32,400 plants/ha (80,000 plants/acre). A study was established in a commercial okra field on 8 June 2005 by thinning seedlings to the following within-row spacings 5, 10, 15, 20, and 25 cm (2, 4, 6, 8, and 10 inches). This makes for plant populations of 35,270, 17,640, 11,760, 8,820, and 7,050 plants/ha (87,120, 43,560, 29,040, 21,780, and 17,420 plants/acre). Plots were 4.6 m (15 ft) long by three rows wide. Harvest data were collected from 3.0 m (10 ft) of the center row every Monday, Wednesday, and Friday beginning 29 July and ending 23 Sept. Decreasing plant population lead to predictable results: decreasing plant height, increasing branching, and increasing yield per plant. Effects of plant population on plant architecture, yield, and fruit characteristics will be presented.