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PROYECTO DE TITULACIÓN

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INGENIERO AGRÓNOMO

**EFEECTO DE LA DENSIDAD POBLACIONAL EN EL
COMPORTAMIENTO AGRONÓMICO Y PRODUCTIVO DE LA
VARIEDAD DE ALGODÓN “BRS-336”**

AUTOR:

CAÑARTE CAÑARTE GILMAR JESÚS

TUTOR DE TRABAJO DE TITULACIÓN:

Ing. Agr. FERNANDO SÁNCHEZ MORA Ph.D.

COTUTOR DE TRABAJO DE TITULACIÓN:

Ing. Agr. ERNESTO CAÑARTE BERMÚDEZ Ph.D.

SANTA ANA- MANABÍ- ECUADOR

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Abstract

In the present investigation, the effect of the spacing between lines and between plants on the growth, development and production of the cotton variety BRS-336 was evaluated. Thirteen planting densities 55556, 37037, 27778, 50000, 33333, 25000, 45455, 30303, 22727, 41667, 27778, 20833 and 62500 pl ha⁻¹ were used, with single row planting arrangements, resulting in thirteen treatments, replicated four times. The variables recorded were germination percentage, plant height (cm), daily plant height increase (cm), plant height increase (cm) between development phases, stem diameter (mm), number of internodes of the stem, internode length (cm), total number of branches / plant, number of branches / plant above the first flower, number of productive branches / plant, days at close of crop, chlorophyll index (photosynthetic pigments), days to appearance of the first flower bud and number of flower buds / plant, days to the opening of the first flower and number of flowers / plant, days to the appearance of the first acorn and average number of acorns / plant, days to the opening of the first cocoon and number of cocoons / plant, yield in kg / plot and kg ha⁻¹, fiber-seed ratio, incidence of cutworms, incidence of other arthropods and percentage of diseased acorns. The results obtained in the research indicate that the distance between plants (m) was significantly influential in most of the agronomic and productive variables, in comparison with the distance between the sowing line, while the interaction was not significant, the distance between a plant of 0.2 m, it registered the best development of the plant in the growth phase. As better stem diameters were found with 0.9 m of distance between lines, the number of branches above the first flower and productive branches per plant increased significantly as the distance between plants increased, the 0.4 m distance between plants obtained a better performance in the productive and physiological variables, bud / plant opening, number of flower buds / plant and chlorophyll index (photosynthetic pigments), the distance of 1.1 m between lines and 0.2 m between plants (45,454 pl ha⁻¹), when analyzed separately, showed the best yields in kg ha⁻¹, obtaining 5320 and 5257 kg ha⁻¹ of raw cotton, respectively, the combination of the studied factors registered higher values in the agronomic, productive and sanitary variables when they were compared with the control (conventional distancing used by farmers).