

(pairwise comparisons). In the period of 1.42 - 5.17 years no differences were detected; nor were differences in MAI-DBH in pairwise comparisons in the 1.42 - 5.17 years period. At 5.17 years no differences in mean H between systems (7.1 m in full sunlight and 6.97 m shade) were found; but DBH was greater in full sunlight (8.46 cm) than in shade (6.03 cm). Relation between climate variables and MAI were not detected. Insects damage were only present until 2.31 years in partial shading in 64 individuals. This is the first work assessing the initial growth of *Cariniana pyriformis* in plantations, providing information for future plantations.

Ecological contribution of the Siempre Verde Forest in the Guangras community within Sangay National Park, Ecuador / Contribucion a la ecología del bosque siempre verde de la comunidad de guangras en el parque nacional sangay ecuador

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Este trabajo tuvo como objetivo determinar el efecto de las variables ambientales edáficas y dasométricas sobre el bosque siempre verde de la comunidad de Guangras en la Parroquia Achupallas, Ecuador a partir de conocer su estado de estructura y composición actual. Se establecieron 4 transeptos de 3600 m² cada uno, dos en la parte baja y dos en la parte alta del área, distribuidos al azar, se realizó un estudio florístico, determinándose la diversidad, el Índice de valor de importancia ecológica (IVIE), el volumen por especie y un Análisis de Correspondencia Canónica (CCA) para analizar el efecto de las variables ambientales sobre la vegetación. Como resultados. Se registran un total de 18 especies arbóreas pertenecientes a 15 familias y 15 géneros siendo las más representativas las familias Cunoniaceae, Asteraceae y Myrtaceae, las especies de mayor IVIE resultaron *Miconia* sp, *Aegiphila* sp y *Weinmannia mariquitae* así como la inexistencia de un gradiente al resultar un CCA con inercia igual a 0.3564 donde las variables de mayor peso son las del suelo específicamente la pedregosidad, la textura y la fisiografía.

Aniba perutilis Hemsley and *Pachira quinata* (Jacq.) W.S. Alverson initial growth in a tropical humid forest in Antioquia, Colombia

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Aniba perutilis and *Pachira quinata* are valuable species in South America wood market. These species are harvested in the natural forest, taking their populations to high-degree of degradation. Information about their initial growth and interaction with environmental conditions are scarce and are essential for planning purposes. We correlated the growth in total height (H) and diameter at breast height (DBH) of *Aniba perutilis* and *Pachira quinata* with climate variables. In October 2013, three plots were established with 73 individuals of *Aniba perutilis*, and three plots with 107 individuals of *Pachira quinata* at full sunlight in an abandoned grassland for cattle; 15 dasometric evaluations were done until 5.17 years old. Monthly average temperature, relative humidity, precipitation, and evapotranspiration were registered; 16.5 % of individuals of *A. perutilis* survived. At 5.17 years mean annual increment (MAI) in H and MAI-DBH were 0.44 m and 0.35 cm, respectively. MAI-H correlated negatively with temperature, precipitation and evapotranspiration, and positively with relative humidity. All individuals of *P. quinata* survived. At 5.17 years MAI-H and MAI-DBH were 0.92 m and 1.41 cm, respectively. MAI-H correlated negatively with temperature and evapotranspiration, and positively with relative humidity; MAI-DBH correlated negatively with temperature and relative humidity, and positively with precipitation and evapotranspiration. In all assessments, 37.4% of the *P. quinata* individuals were leafless. Insect attacks were not significant in *P. quinata*, but *A. perutilis* presented 73 attacks in the 5 years of evaluation. This is the first assessment of the initial growth of *Aniba perutilis* and *Pachira quinata* providing information for future plantations.

Assessing restriction resulting from container volume on growth and allocation of resources in Cerrado tree species / Avaliação da restrição do volume do recipiente de cultivo no crescimento e alocação de recursos em espécies arbóreas de Cerrado

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O tipo e volume do recipiente utilizado no cultivo de mudas tem um efeito significativo na distribuição de recursos entre raiz e parte aérea, causando prejuízo significativo no desempenho das mudas. O objetivo foi avaliar o efeito do volume do recipiente de cultivo em três espécies florestais nativas no crescimento em altura e na alocação de recursos entre raízes e partes aéreas. O experimento foi conduzido em casa de vegetação, na Embrapa Gado de Corte em Campo Grande, MS, entre abril a outubro de 2018. As espécies utilizadas foram *Anadenanthera peregrina* var. *falcata* (Benth.) Altschul, *Hymenaea stigonocarpa* Mart. ex Hayne e *Myracrodruon urundeuva* Allemão. Após a germinação das sementes, as mudas foram cultivadas em recipientes de 110 cm³ (tubetínho), 290 cm³ (tubetínho) e 7000 cm³ (citropote). O crescimento das mudas foi monitorado individualmente por 120 dias, através da medida da altura da parte aérea (cm). Ao final do experimento foram registradas as seguintes medidas: massa seca da raiz, massa seca da parte aérea, fração de massa na raiz e massa seca da planta. As diferenças em altura da parte aérea entre os tratamentos foram significativas apenas em *A. peregrina* e *M. urundeuva*. A massa seca da raiz também diferiu significativamente apenas em *A. peregrina* e *M. urundeuva*, recipientes de maior volume apresentaram valores maiores. A alocação de recursos para as raízes em *A. peregrina* e *M. urundeuva* foi negativamente relacionado com o tamanho da planta, já em *H. stigonocarpa* a relação com o tamanho da planta foi positiva.

C1z: SILVICULTURE AND PLANT COMMUNITIES

Population distribution and structure of *Afzelia* species in Southwestern Nigeria

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Investigation was conducted to assess the population distribution and structure of *Afzelia* species in Southwestern Nigeria. The study areas are Omo Biosphere Reserve, Gambari Forest Reserve and Akure Forest Reserve. Data were collected in 125 plots of 2500 m² on diameter at breast (DBH ≥ 10 cm), total height and bole height of *Afzelia* species. Tree variables such as Blackman and Green indices, basal area, average diameter, height of Lorey and density were calculated and