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Monitoring of reproductive phenological events of species of Myrtaceae in the Brazilian Atlantic Fores

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Myrtaceae is a better representation of families in Brazil where there are 23 genera and 1000 species, with frequent distribution in the Atlantic Forest. This family has economic potential, being used for human consumption, production of medicines and serves as food for wildlife. The study aimed to investigate the reproductive phenology of four species of the family Myrtaceae and correlate them with climatic variables. During the eight years, were (Embrapa Forest) monitored reproductive phenology of species: araçá (Psidium cattleianum); cerejeira-do-mato (Eugenia involucrata); guabiroba (Campomanesia xanthocarpa) and pitanga (Eugenia uniflora) in areas of the Rain Forest, Paraná - Brazil (250 17 ’30 "S and 490 13’ 27" W). The observations of the phenological phases of flowering and fruiting, were performed twice weekly during the period 2003 to 2010, 10 trees of each species. At flowering observed phases (stages) of: the differentiation of bud, early flower bud formation, elongation of the stamens, fully open flower, anthesis, the stamens start of the fall and early fall of stigmata. In fruit: the early formation of the fruit, green fruit, ripe fruit and dispersing seeds. The data were analyzed and determined the Pearson correlation coefficients (x2) to check the frequency of occurrence of phenological phases, with gamma distribution. We observed that during the eight years the Psidium cattleianum flourished in the period from July to December (156 days - winter / spring), with peaks flowering in September and fruiting period from September to March (186 days - spring / summer), with peak fruiting in December. For Eugenia involucrata, flowering occurred from July to October (96 days - winter / spring), with peak flowering in September and fruiting from August to November (108 days - winter / summer), with peaks fruiting in October. The Campomanesia xanthocarpa flourished in the period from September to November (68 days - spring) and fruiting period is from November to January (72 days - spring / summer). The Eugenia uniflora presented bloom from August to November (96 days - winter / spring), with peak flowering in September and fruiting from October to December (65 days - spring / summer). It was observed that in the last four years because of warmer winters and less precipitation in this region, it was anticipated the formation of flower bud and flowering plants younger Eugenia uniflora and Eugenia involucrata. Reproductive phenology of the species are concentrated in the second half of each year during the spring / summer.