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Behavior of Seedless Grape Cultivars under Tropical Conditions in Brazil

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Most table grapes grown in Brazil, especially 'Niágara Rosada' (rose mutant of "Niagara"), the cultivar Italia and its mutants Rubi, Benitaka and Brasil, have seeds. This study aims at evaluating the yield potential of the seedless cultivars Thompson Seedless, Flame Seedless, Ruby Seedless, Marroo Seedless, Loose Perlette, Pasiga, Imperatriz e Emerald Seedless, grafted on rootstock 'IAC 572', under tropical conditions in the Northeast of the state of São Paulo. The vineyard used, conducted in the bower system with 3.00 x 5.00 m field spacing, was submitted to two cycles a year, one for shoot formation (pruning being performed on spurs), the other one for production (pruning performed on canes with 18 buds per cane). In the first cycle of spur pruning initiated in the rainy mid-summer, the growth of 6 shoots per plant on three plants per cultivar was observed through weekly measuring of their length and counting of the nodes. In the third cycle, the second with long pruning, initiated at the end of winter, the pruning weight and the real fertility (FR) for each bud position after budburst were evaluated. All cultivars showed excess of vigor, with elevated

growth rates of the shoots up to the 12th week after budburst, elevated pruning weight (over 4.60 kg plant⁻¹) resulting in low FR, except for 'Marroo Seedless, whose average value was 0.60 despite the high pruning weight of 4.65 kg plant⁻¹. The cultivars with medium FR were: Flame Seedless (0.22), Ruby Seedless (0.22), and Loose Perlette (0.27). The cv. Thompson Seedless achieved a medium growth rate of 4.00 cm day⁻¹ until approximately 120 days after pruning. The medium pruning weight was 5.20 kg plant⁻¹ and the medium fertility was 0.17 between the 5th and the 18th bud.

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