FLOWERING BEHAVIORS OF TAIWAN AVOCADO CULTIVARS A-30

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The flowering behaviors of 9 main avocado cultivars in Taiwan were observed for three years. Our observation included 6 Taiwan native cultivars- 'CAES 1', 'CAES 2', 'CAES 3', 'CAES 4', 'Hung-Shin-Shi-Yeh', '79-6-5-3', and three foreign cultivars- 'Halemana', 'Hall', 'Choquette'. Only 'CAES 1', 'CAES2' and 'Hall' belong to B type, and the others belong to A type. All of the cultivars flowering from December to April were divided into early, medium, and late flowering groups. The flowering period of 'CAES 4', which is the earliest flowering cultivar, begins at early December and ends at late March. 'CAES 3' is later than 'CAES 4', which blooms from mid-December to early April. '79-6-5-3', 'Halemana' and 'CAES 1', which belong to the medium flowering group, bloom from late January to mid-March, late January to early April, and early February to late March respectively. The flowering periods of the late flowering cultivars, which include 'Hall', 'CAES 2', 'Hung Shin Shi Yeh' and 'Choquette', are from late February to mid-April, early March to early April, early March to early April, and early March to mid-April respectively. The full bloom period of 9 cultivars lasts about 1 to 2 month. Warmer temperature during flowering period may shorten the full bloom period of early and medium flowering cultivars, and terminate flowering ahead. However, for late flowering cultivars, warmer temperature during flower bud formation may delay the development of inflorescence and the end of flowering. The effect of low night temperature (which means the minimum night temperature is below 18?, especially lower than 15?) on the flowering cycles of 'CAES 3', 'CAES 4', 'Hall' and 'Choquette' was also observed. The flowering of both female and male flower stages was delayed , so was the anther dehiscent time. During the coldest season in Taiwan, the female flower stage of B type cultivars disappeared, only male flower stage remained intact; male and female flower stage of A type cultivars overlapped. Meanwhile, 10% to 60% stigma of these four cultivars remained in white color during male flower stage. It seems reasonable to conclude that Taiwan's avocado might have high selfing rate (close pollination and self pollination) and it is possible to plant only one type of cultivars in the same area.