113 - Mite (Acari) diversity on peach trees in different production systems in the State of Rio Grande do Sul, Brazil

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A study was conducted to determine the mite fauna of peach trees cultivated under "conventional" and "integrated" systems, in Pelotas and Bento Gonçalves municipalities, State of Rio Grande do Sul, southern Brazil. For each location and each production system, peach cultivars were 'Chimarrita' and 'Maciel', except for the conventional orchard in Bento Gonçalves, where 'Chimarrita' was the only cultivar; additionally, an organic orchard was included in the investigation in Pelotas, where the cultivar was 'Ametista'. In both areas, leaf samples were taken monthly, from February to April 2008 and from September 2008 to January 2009. In Pelotas, samples were taken from

14, 15 and 12 plants from each of the conventional, integrated and organic management orchards, respectively. In Bento Gonçalves, samples were taken from 15 plants of each cultivar, irrespective of the type of management. From each plant, 7 leaves of the median part of a branch of the median vertical third of the plant canopy were collected (1.6 to 1.8 m from the soil surface). In June and July, when plants had no leaves, sections of branches were sampled, to determine mite density; two 15 cm long sections were taken from the median vertical third of the canopy of each plant. In the laboratory, samples were examined under a stereomicroscope, counting separately the mites found on each leaf surface and on the total extension of the branch sections. On the leaves, 15 mite species were found, of which 7 were predators (6 Phytoseiidae and one Stigmaeidae), 6 were phytophagous (Tetranychidae) and two were generalists (Tydeidae and Acaridae). The phytoseids *Neoseiulus californicus* (McGregor) and *Euseius brazilli* (El-Banhawy) were the most abundant predatory mites, except for the organic orchard, in which *N. californicus* was not found. Of the tetranychids *Panonychus ulmi* (Koch), *Tetranychus urticae* Koch and an unidentified species of *Tetranychus* were the most abundant phytophagous mites. Independently of the production system and the cultivar, more than 80% of the mite specimens on leaves were identified as *Tydeus* sp. This was the only mite species found on branches.