

Sustainable harvest practices of *Haplopappus taeda*, a medicinal plant from the Andean mountains

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Acta Hortic. 955: 231-236: 2012

Abstract

Haplopappus taeda is one of the resinous *Haplopappus* species traditionally used in Chile as a digestive herb called “bailahuén”. It is endemic to the mountain areas over 1300 m above sea level at latitudes 33 to 35° S. Collectors of wild material often eradicate the whole shrub or cut the woody branches at soil level. To study whether these harvesting practices are sustainable we marked wild plants in an area with restricted access and submitted them to different harvesting levels: cutting all branches at soil level, or cutting 100%, 80% or 50% of the leafy tips of the branches. Plants were monitored over two years and compared with non-harvested plants. The average aerial biomass of a wild plant reached about 600 g dry weight, of which 235 g are green resinous leaves. Sixty percent of the individuals cut at soil level did not re-grow at all, whereas the remaining 40% showed only half the number of branches after one year, and 88% of the number of branches after two years. Even when cutting only 80% of the green tips, after two years the number of branches was reduced to 80% compared with the control treatment. When harvesting all green parts, each branch developed in the following year about 11 leaves, whereas in the treatments with some of the leaves left, the number of leaves present reached between 16 and 17. In the second season these differences were no longer significant. We consider as sustainable “wild-crafting” the level where the biomass of the harvested plants did not differ significantly from the non-harvested plants after one growing season. This condition was only achieved in the treatments where 50% of the leafy tips were cut.