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Mycorrhizal Colonization Improves Nutrient Uptake Efficiency of *Nassella pulchra* in Nursery Conditions

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The interest on mycorrhizal technology to create more sustainable horticultural practices is increasing. Mycorrhizal colonization improves plant nutrient uptake offering the possibility to maintain crop yields at reduced fertilizer levels. We investigated the effects of mycorrhizal colonization on the growth and nutrient uptake of *Nassella pulchra* (purple needlegrass), a California native plant widely propagated for ornamental landscapes and ecological restoration. Mycorrhizal and nonmycorrhizal plants of *N. pulchra* were grown in a soilless mix with 0, 28, 50, 75, and 100 ppm of nitrogen (N) and 10 ppm of phosphorus (P). Plant growth, mycorrhizal colonization, and the content of N and P in shoots was analyzed. Mycorrhizal colonization increased the growth of *N. pulchra* plants grown with 75 ppm of N but had no effect on the growth of plants grown with 0, 28,50 and 100 ppm of N. There were no significant differences between the shoot height, shoot dry mass and total dry mass of mycorrhizal and non mycorrhizal plants of purple needlegrass grown in the latter N rates. Mycorrhizal colonization improved the nutrient uptake efficiency of *N. pulchra*. Mycorrhizal plants grown wit 75 ppm of N reached the same growth than nonmycorrhizal plan grown with 100 ppm of N. In addition, mycorrhizal plants of pulchra had greater P contents than nonmycorrhizal plants a all N rates, independently of their growth responses to mycorrhizal colonization.