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RESEARCH PAPER

Effect of different nitrogen levels through *Neem* coated urea and calcium sprays on leaf and soil NPK and Ca status and phytotoxicity in peach

Kamal K. Pande*, D.C. Dimri[1] **and** Sanjay Kumar[2]
Krishi Vigyan Kendra (ICAR-VPKAS), Kafligair, Bageshwar (Uttarakhand) India
(Email : pande4kamal@gmail.com)

Abstract : A two year investigation was conducted at Krishi Vigyan Kendra (ICAR- VPKAS), Kafligair- Bageshwar during 2016 and 2017 in peach cv. RED JUNE with ten treatments *viz*., 375 g N per tree + 0.5 % $CaCl_2$ (T_1), 375 g N $tree^{-1}$ + 1.0 % $CaCl_2$ (T_2), 375 g N $tree^{-1}$ + 1.5 % $CaCl_2$ (T_3), 500 g N $tree^{-1}$ + 0.5 % $CaCl_2$ (T_4), 500 g N $tree^{-1}$ + 1.0 % $CaCl_2$ (T_5), 500 g N $tree^{-1}$ + 1.5 % $CaCl_2$ (T_6), 625 g N $tree^{-1}$ + 0.5 % $CaCl_2$ (T_7), 625 g N $tree^{-1}$ + 1.0 % $CaCl_2$ (T_8), 625 g N $tree^{-1}$ + 1.5 % $CaCl_2$ (T_9), 500g N $tree^{-1}$ + Water spray (T_{10} control). The source of nitrogen fertilization was neem coated urea. The experimental findings revealed that maximum leaf nitrogen content was estimated under T_9 (3.721% and 3.838% in 2016 and 2017, respectively), while maximum leaf phosphorus content was estimated under T_1 (0.450%) in first and T_3 (0.456%) in second year. During both the years, the maximum leaf potassium content was estimated under T_2 (2.096% and 2.110% in 2016 and 2017, respectively). The highest leaf calcium content was estimated under T_3 (1.735% in 2016 and 1.744% in 2017). Irrespective of nitrogen fertilization levels, highest calcium chloride concentration (1.5%) resulted in phytotoxicity which was evident by marginal leaf scorching. Significant differences for available soil nitrogen were found, while other studied nutrients did not differ significantly.

Key Words : Nitrogen levels, *Neem* coated urea, Calcium chloride, Leaf, Soil nutrient status

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*** Author for correspondence:**
[1]Department of Horticulture, G.B. Pant University of Agriculture and Technology, Pantnagar, U.S. Nagar (Uttarakhand) India
[2]ICAR- VPKAS, Almora (Uttarakhand) India