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Evaluación de la fertilización nitrogenada en rosas (*Rosa sp.* var. Classy) usando nitrógeno 15 como trazador

Basantes, Emilio [a]* - Pazmiño, Diego [b] - Avalos, Rodrigo [a]
Sangurima, Claudia [b] - Urquiaga, Segundo [c]

[a] Universidad de las Fuerzas Armadas ESPE Av. Progreso S/N, Sangolquí, Ecuador
[b] Comisión Ecuatoriana de Energía Atómica, Quito, Ecuador
[c] Embrapa Agrobiología. Seropédica, Río de Janeiro, Brasil

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ABSTRACT

The objective of the study was to evaluate nitrogen fertilization in the production of roses (var. Classy), through the use of the isotope nitrogen 15 as a tracer. The use of stable isotopes in agriculture is a direct technique useful for studies of absorption and efficiency of
use of fertilizers. Ammonium nitrate labeled 15 was used in this research and was applied in micro plots of treatments in study, following the same conditions of farm management. Applications were made every week according to the frequency of fertilization that made the farm. During the study assessed growth and vegetative mass production, content of nitrogen in the soil and recovery of nitrogen by plant. The samples were taken at 0, 30, 60 and 90 days of the flowering stem growth. The nitrogen content was determined by micro Kjeldahl method and optical emission spectro-photometer, this last far 15 nitrogen. The results allowed to evaluate the amount of nitrogen from the fertilizer, the amount that was left in the soil and fertilizer use efficiency. It was concluded that the content of nitrogen recovered from the fertilizer into the soil and plant, varied around 108.6 kilograms of nitrogen per hectare, which shows that the soil has a relatively stable capacity of retaining the nutrient, so that any dose of applied fertilizer, exceeding the capacity of soil retention is subject to losses of a round of the 25.4 to 57.2 per cent, addition that the excesses of applied nitrogen had effect on performance and salinity.

Keywords: Nitrogen 15, isotopes, Nitrogen recovery in roses.

* Correspondencia a: Universidad de las Fuerzas Armadas ESPE, AV. Progreso S/N, Sangolqui, Ecuador. Teléfono:+593 0991391334 Correo Electrónico: erbasantes@espe.edu.ec