

Effect of Nitrogen and BAP in the Tissue Culture of *Lupinus pubescens* Benth, an Emblematic Quito Plant

Ivonne Vaca^{1*}, Thaly Benavides², Adriana Córdova², Felipe Andrade³, Alicia Morales³ and Tatiana Jaramillo³

¹BIOARN Research Group, Salesian Polytechnic University, Ecuador

²Universidad Politécnica Salesiana, Engineering Degree in Biotechnology of Natural Resources, Ecuador

³Botanical garden of Quito, Ecuador

Lupinus pubescens Benth, also known by the name of Ashpachocho, is a native ornamental plant of Ecuador, due to the beauty of its flowers, it was declared as one of the species of patrimonial and emblematic flora of the Metropolitan District of Quito. The present work was developed in Quito - Ecuador. The current study was performed to evaluate three total nitrogen concentrations, coming from the Murashige and Skoog (MS) salts, components of culture media, during the tissue culture adaptation phase and, to determine the effect of the presence of BAP (Benzil amino purine) in the media, for the period of the multiplication. The seeds exposed to 4.88mM of the total nitrogen concentration presented the highest germination percentage among all the treatments (100%). Adding BAP (1ppm) to the medium, during multiplication phase achieved a higher average multiplication index (3.22). The results show that the reduction of total nitrogen in the culture medium was a determining factor in the increase of germination, besides that the presence of BAP in the culture medium favors the production of shoots per plant.

Biography:

Ivonne Vaca Suquillo did specialization in Agricultural Engineering and Masters in Agricultural Biotechnology. With 10 years of experience in the development of plant tissue culture, in different species, among these Andean fruits, tropical fruits, ornamental plants, plants of conservation interest, among others. With 9 years of experience in university teaching, in chairs such as Botany, Plant Biology and Plant Biotechnology.

She is a Director and collaborator of research projects in different areas of the agricultural sector, biological control and molecular biology