Are These Plants GMO?

Pires, Luis (School: Bergen County Academies)

This study purposely aimed to determine the effects of substances on the growth of plants. The researcher hypothesized that adding substances into the growing medium will alter the genetic make-up of the plants thereby is considered as Genetically Modified Organism. Using the normal condition on planting means Non-genetically Modified Organisms are produced. Using standard protocols in hydroponics systems - 15 set-ups with 5 seeds on each were treated with distilled water, Vitamin D (25%, 50% and 75%) and Miracle Gro - NPK were implemented. Based on the data collected after 14 days from seed to plant, results showed that both Vitamin D and Miracle Gro - NPK enhanced faster growth by reducing the germination period to 3 instead of 5 and produced healthier leaves and stem structures as shown on the number of leaves produced compared to pure water only. 2Of the two test substances, NPK showed more promising results as all plants bloomed and looked robust compared to Vitamin D and water-only plants. 3As for Vitamin D, the 25% provides better results compared to 50% and 75% Vitamin D content. Therefore, the researcher conclude that the addition of Vitamin D and the Miracle Gro - NPK enhanced the growth of plants and thus confirmed the hypotheses of the study. However, to claim the produced plants as Genetically Modified Organisms is not as this study was not able to do genetic screening on the plants. Thereby, it is highly recommended for the next researchers to do the process to determine whether it is GMO or Non-GMO at all.