

Optimisation of Barcode and RFID Technologies in Plant Production

The aim of technology is to improve and make work easier. Barcodes were therefore developed to help solve the laborious and cumbersome problems encountered in various fields. Since the introduction of barcodes in June, 1974, it has been used in various areas such as commerce, health, logistics, entertainment and agriculture mostly for identification, tracking and security purposes. In horticulture, barcodes have already been used for tracking plants, controlling stock, storing information on product and for quality control. However, the problems associated with barcode use in horticulture include scanning of pots with barcodes at close proximity, thereby making work tedious. Also most barcodes used in greenhouses are not biodegradable leading to recycling problems. Some labels are sometimes damaged and often rendered unreadable during the production process by soil, algae, mold, dirt and water.

Therefore, RFID (Radio Frequency Identification) tags are being introduced into horticulture in order to help solve some of the aforementioned problems. Even though RFIDs also have their challenges, this project seeks to compare both methods for their use not only in the area of logistics, but especially in horticulture.