

## ABSTRACT

In the agricultural sector in Indonesia, the most important thing in crop yields is because Indonesia's climate is tropical or has 2 seasons, namely the rainy season and the dry season. In urban areas, a lot of land is decreasing for farming due to a lot of land in urban areas being used for the construction of residences and public facilities. Therefore, innovation is needed to find new ways to grow crops in urban areas. The solution to this problem uses one method, namely aquaponics. In some areas in the mountains that are still lacking in sunlight, the crop yields are less than optimal. This research was carried out using an aquaponics system and additional light assistance in the form of a growlight. The light used is the red and blue spectrum. Observations included plant stem height, leaf size, and number of plant leaves. In observations, the sections that used grow lights were superior in leaf length and number of leaves compared to those without using additional growlights. Observation of sunlight remotely can already be seen on smartphones using the internet. Plants that use growlights with red and blue LEDs will accelerate the growth of leaf length and leaf number of strawberry plants.

Keywords – aquaponics, color spectrum, urbanization