ABSTRACT

On a plant growth, a precise formula is needed to obtain the desired crop yield. Starting from the type of plant seeds, soil type, and fertilizer that will be used. In addition, moisture, sunlight, and water requirements for plants also affect the yields of these plants.

Therefore it takes a program that can be used to predict how the plants we grow will grow. L-systems can predict how stems, twigs, leaves and fruits grow. So we can adjust what the plants need to get the desired plants. For that process, we use the SAD (Sum of Absolute Difference) algorithm. The method used to detect this motion works by measuring the similarity between the image blocks and then taking the difference of mutation (Absolute Difference) between each pixel in the original block and the corresponding pixel in the block used for comparison

With using the SAD (Sum of Absolute Difference) algorithm can produce a growth rules used in L-Systems, where the temperature in the room can affect the plant's growth. The average plant grows at a temperature of 24 degrees celcius and grows during the day. To further this research is well developed by detecting the movement towards the side on its growth.

Key Word : *L-systems, SAD (Sum Of Abdolute Difference)*