we can monitor the moment of robot and the condition of the crop in our PC. As the functionality of the robot is only to move around the field and to monitor the condition of the crop and forward the data to the camera which is handled by the user so here we can use a 8051micro-controller. Also we are using s DC motor towards the robotic end. The DC motor works under the principle of electro-magnetic induction.

A fully autonomous robot can:

- Gain information about the environment
- Work for an extended period without human intervention
- Move either all or part of itself throughout its operating environment without human assistance
- Avoid situations that are harmful to people, property, or itself unless those are part of its design specifications

6. Camera

There are two types of cameras

- **Wired.**
- **Wireless.**

By the use of wired cameras we can connect the wire to our PC's to monitor the condition of the crop. The maximum distance that wired cameras will supports is for 20meters.

In real time scenario we can go with wireless cameras as there won't be any kind of interaction between the PC and a camera. The maximum distance that a wireless camera supports is of 10meters.wireless security system acts as a visible deterrent to criminals, allowing you to record events at home and monitor staff at work. Some of our wireless cameras also connect to wireless monitors allowing you monitor and record footage from your security camera to review at a later date. After the exposure, the pixel is read out and the following stages measure the signals S1 and S2. As the length of the light pulse is defined, the distance can be calculated with the formula:

$$D = \frac{1}{2} \cdot c \cdot t_0 \cdot \frac{S2}{S1 + S2}$$

7. Working Algorithm

Initialize the LCD
{
Monitor the temperature from temperature sensor
{
If(temp< set value)
{

Check the water content
{
If(water content <set)
Switch ON the motor and send the info. to smart phone
Else
{
Motor is OFF
}
}
}

8. Applications

This system is an advanced version of the robotics technology where we are using the robot for monitoring the condition of the crop. As in these days we can't go and see the condition of the crop regularly we can verify the condition in our PC by sitting at our house. This kind of systems can also be used in industrial systems for frequent monitoring and also for controlling the system.

9. Conclusion

The system had been successfully designed for monitoring the condition of the crop regularly by using robot as it continuously moves with in the field and we can see the condition of the crop in our PC. The automated irrigation system developed proves that the use of water can be diminished for a given amount of fresh biomass production. Besides the monetary savings in water use, the importance of the preservation of this natural resource justify the use of this kind of irrigation systems

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www.ijsr.net
IJSR
ISSN (Online): 2319-7064

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