

IOT Based Smart Pesticides Sprayer Robot

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Abstract: Agriculture is a profession of many tedious processes and practices, one of which is the spraying of insecticides in the vineyards. A typical vineyard requires extensive spraying every 4-5 days in the summer and every 3-4 days in the rainy season. The conventional methods are: a person carrying a sprayer and manually actuating a lever to generate pressure and pump the pesticide through a tube or a mobile vehicle carrying an inbuilt compressor and sprayer unit which has to be manually driven by a human operator. These methods are fuel consuming and susceptible to human errors. Another major drawback in human operated systems is that the operator is exposed to the harmful chemicals while spraying. Long term exposure, as in this case, can be extremely detrimental to the operator's health. This is a project which can be viewed as a viable alternate to these methods. The Automatic sprayer is a three wheeled vehicle which sprays pesticide in any given vineyard with almost nil human assistance. The vehicle is powered using an onboard solar powered battery which brings down the running cost. The control of the vehicle is achieved using an inbuilt microcontroller unit which is programmed to respond to the bluetooth device

Keywords: Microcontroller, Battery, LCD, LDR, Motors, Relays, Bluetooth device

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