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Design and Development of UAV Based Pesticide Sprayer in Agriculture Application

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Abstract: *Agriculture is vital to the Indian economy. Agriculture is a major source of revenue in India. Crop production rates in agriculture are determined by a variety of factors such as temperature, humidity, rain, and so on. Which are natural causes beyond the control of farmers. Agriculture is also affected by elements such as pests, disease, fertilizers, and so on, which may be controlled by properly treating crops. Pesticides could improve crop output, but they also have an impact on human health. Crop production is determined by the pesticides and fertilizers used in the fields. However, manual handling of these items poses health risks. The World Health Organization projected that over 2.5 million pesticide poisoning incidents occur each year, with the bulk occurring in nations like India. The goal of this study is to solve the problem by automating the spraying of pesticides and fertilizers in the fields. The system is made up of an aerial sprayer, which is made up of a quadcopter and a spraying mechanism. The quadcopter is controlled by radio frequency signals, and pesticide spraying is accomplished with minimal physical work and no health risks. The goal of this project is to primarily counteract the negative effects of pesticides on humans while also covering more acres of land in a short period of time.*

Keywords: Fertilizers, Drone, Radio Frequency

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