

Review of: "Modelling of Quadcopter for Precision Agriculture and Surveillance Purposes"

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This review focuses on the article titled "Modelling of Quadcopter for Precision Agriculture and Surveillance Purposes," which presents an insightful and detailed exploration of using a specifically designed quadcopter for precision agriculture, particularly in crop spraying. The article stands out for its comprehensive overview of the current state of precision agriculture, particularly in the use of unmanned aerial vehicles (UAVs) for crop spraying.

Authors delve into various types of UAVs available, their capabilities, and potential applications in precision agriculture, providing a well-rounded understanding of the subject. The paper's strength lies in its detailed analysis of the challenges and opportunities associated with UAVs in this field, offering a balanced view of the current technology's potential and limitations.

A significant contribution of this article is the development of a mathematics-based model for a quadcopter with a substantial payload capacity of 7 kg. The physical fabrication of the quadcopter, following the computer model, and its subsequent testing and evaluation, is meticulously described, highlighting the practical application of the theoretical model. The dimensions and specifications of the quadcopter, including the propeller lengths, are clearly stated, adding to the paper's technical depth.

The simulation results, showing a stable flight trajectory and an even distribution pattern of the liquid payload, are promising. They indicate the model's potential efficacy in precision agriculture, particularly in crop spraying. However, the article does not shy away from discussing the limitations and flaws observed in the quadcopter assembly, such as the improper attachment of propellers and inaccurate motor alignment, which affected the overall efficiency. This honest appraisal adds credibility to the study.

In conclusion, the article is a valuable contribution to the field of precision agriculture, offering practical insights and a thorough analysis of both the potential and the challenges of using UAVs, specifically quadcopters, in this domain. The recognition of the model's shortcomings and the commitment to further work to address these issues show a clear path forward for future research and development in this area. The article is well-researched and thoughtfully presented, making it a useful resource for professionals and researchers in the field of agricultural technology and UAV development.