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

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Potential competing interests: No potential competing interests to declare.

First review

This article provides a mathematical modeling of a quadcopter and a general overview of its use for precision crop spraying. According to the authors, the drone was physically manufactured according to the mathematical model, tested, and evaluated. The test results show a stable flight path and a uniformly distributed discharge pattern of its contents. The work is certainly interesting, but there are many gray areas and misunderstandings. I recommend a detailed explanation of this work, especially in the development phase. Thus, a major and judicious revision will certainly improve this work. However, the following directions may need to be addressed.

1. A good literature review has been done. However, recent work needs to be evaluated to assess the current state of progress on this topic.
2. In the introductory remarks, the drone is designed to carry a payload of 7 kg, but in development, simulation, and testing, the payload is 5 kg. Please explain this difference in payload.
3. What type of calibration was used and on what part of the drone?
4. On what basis did the authors define the 5kg or 7kg payload?
5. It was mentioned that the drone was manufactured. No idea about the manufacturing steps and processes, the technology used, the material used, the control frequency, the lift, the flight time, etc.

Second review

- Some figures (4 and 8) need to be improved to be clearer.

- The authors carried out the modeling of a quadcopter with a payload of 7 kg and a general overview of its use for precision spraying of crops. This is an agricultural innovation that must have a positive impact on technological and economic development. It would also have been interesting to draw conclusions on the cost of producing a quadcopter and that of a crop followed using a system produced compared to a crop carried out with the old technology, and to give the technical advantages of the new system.

- The authors have given photos of rotary helicopter drones and fixed-wing drones operated in the field in Figure 3 but have not made a comparative study of the technical characteristics of these two devices, nor made a comparison with other devices on the market.