

Model of 2020-2021 Prototype (Previous)



Model of 2021-2022 Prototype (Current)



Heavy Payload Agricultural Drone



Drone and Payload

This year's AG Drone Capstone team has developed an economical, modular drone for low impact, sustainable agricultural purposes. The drone's primary function is spraying (crop dusting) with the ability to quickly convert to visual data collection, seeding, and other potential implements via a modular payload system.



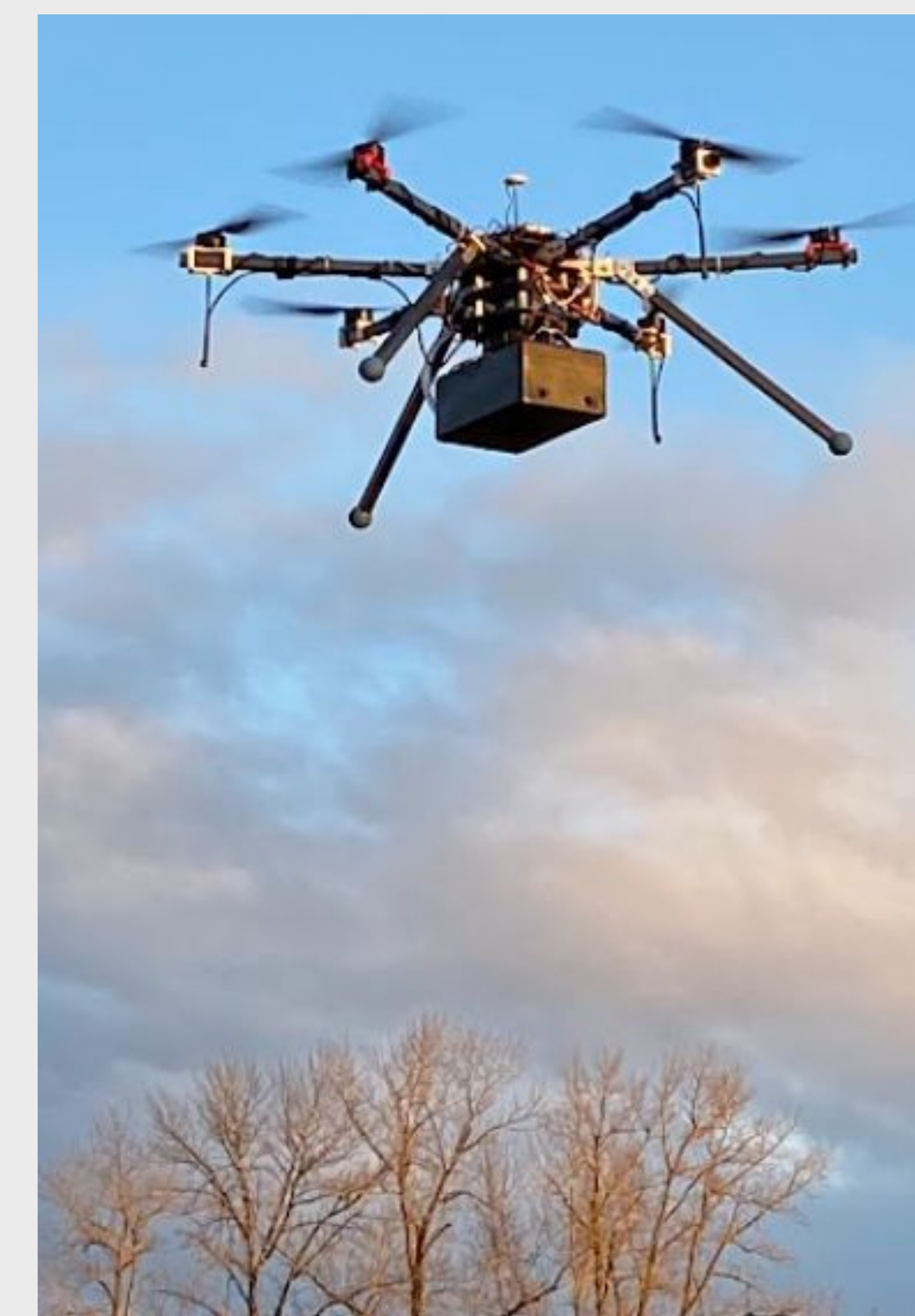
Fluid Spray System Application



Unladen Drone prepared for flight



Pictured: Drone halfway unfolded from its collapsed state (left). Drone mid flight over a field of hazelnut trees, ready to spray (right).



2021-22 AG Drone Team



- Cade Janssen
- Rogue Phillips
- James Plummer
- Cole Rawie
- Robert Richardson
- Mark Shum
- Dr. Sarah Oman (Professor)
- Dr. Kendra Sharp (Advisor)

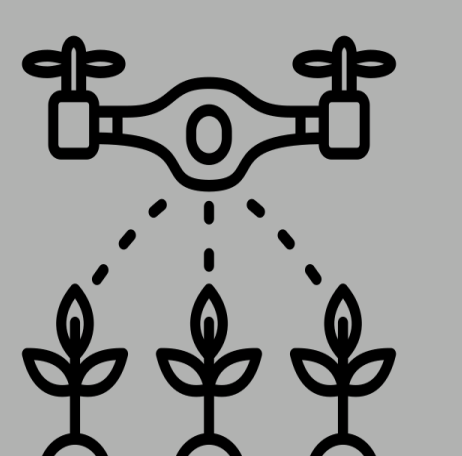
Customer Requirements



Simple maintenance



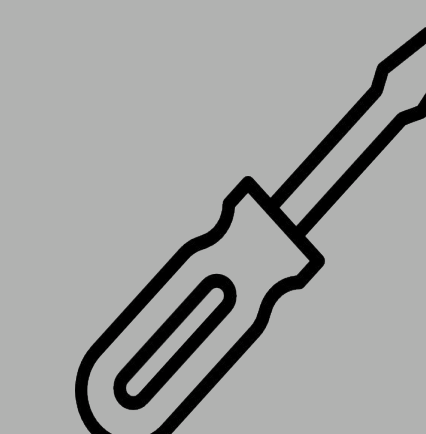
Transported by one person



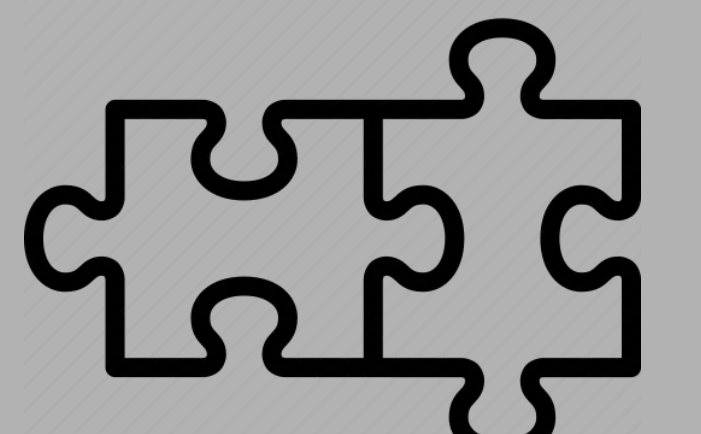
Spray Capabilities



Flight time >20 minutes



Easy setup and operation



Modular payload design

Looking Forward

Documented potential design changes for future teams: Replace DJI flight controller with Pixhawk, replace 24 V system with 48 V system, increase weight savings, and switch to low profile tank for improved center of gravity and ground clearance.



Sponsor / Customer: Bryan Hugill

