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ZenaTechâ??s ZenaDrone begins testing autonomous drone for precision agriculture

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The eight-motor IQ Octo is designed for automated spraying and seeding, with ZenaTech targeting recurring Drone as a Service opportunities in agriculture and solar maintenance



ZenaTech is taking its autonomous drone business deeper into agriculture, moving a new eight-motor aircraft from prototype development toward field testing as demand grows for faster and more precise ways to spray crops and distribute seed.

The Vancouver-based technology company said its ZenaDrone subsidiary has completed the initial Version 1 prototype of the IQ Octo, a medium-sized autonomous drone designed specifically for precision spraying and seeding. The company expects field testing to begin at its Arizona facility in the coming weeks.

The move expands ZenaDrone's IQ Series beyond its existing applications and gives ZenaTech another potential market for its Drone as a Service, or DaaS, model. Rather than relying solely on equipment sales, the company is positioning autonomous drones as an ongoing service for agricultural operators and other commercial users.

The opportunity is significant as farmers look for alternatives to conventional machinery for crop treatment and planting. Agricultural drones can operate in wet fields, difficult terrain and standing crops where tractors and other heavy equipment may be less practical. They can also reduce the need for fuel, labour and water while limiting soil compaction and physical crop damage.

The IQ Octo is being developed around those operating advantages. Its octocopter configuration uses eight motors and is battery powered, with an expected flight time of approximately 20 to 25 minutes per charge. The Version 1 aircraft is designed to carry as much as 25 kilograms of either liquid or seed.

Its agricultural configuration can be adapted for different jobs. For spraying, the aircraft will carry a liquid tank fitted with spray nozzles. For seeding, it will use a hopper and spreader. Once a flight path has been programmed, the drone is designed to fly at low altitude over fields and apply liquid treatments or distribute seed at controlled rates.

That ability to deliver inputs in a targeted manner is central to the precision-agriculture proposition. Instead of treating an entire field with heavy machinery, drone-based application can allow farmers to reach specific areas and work around terrain or crop conditions that make conventional equipment difficult to deploy.

For ZenaTech, however, agriculture is only part of the longer-term plan for the IQ Octo. The company expects a Version 2 of the aircraft to incorporate additional capabilities, including solar-panel maintenance, autonomous refilling, swarm operations and a folding design.

The solar-maintenance application could broaden the addressable market beyond agriculture, particularly as large solar installations create a growing need for inspection and maintenance services. Combining agricultural and energy-related applications could also improve the utilisation of a drone fleet operating under a service-based model.

The company is building the IQ Octo around the same broader shift that is reshaping the commercial drone market: moving autonomous aircraft from specialised equipment toward repeatable, service-based operations. For agriculture, that means the value proposition is not simply the drone itself but the ability to carry out planting and crop-treatment work with greater precision and potentially lower operating costs.

ZenaTech has cited industry forecasts projecting more than 30% annual growth in the precision-agriculture drone market over the next five years. The company is seeking to position its IQ Series to participate in that expansion while creating recurring revenue opportunities through its DaaS business.

The immediate focus, however, remains proving the aircraft in the field. The Version 1 prototype will need to demonstrate that it can safely handle payloads of up to 25 kilograms, maintain stable flight and deliver consistent application rates under real agricultural conditions.

The Arizona testing programme will therefore be an important step for ZenaTech as it moves the IQ Octo from engineering development into practical deployment. Results from those trials are expected to shape further development of the aircraft and its planned Version 2 configuration.

The company has not yet provided commercial launch timelines or detailed pricing for the agricultural service. For now, the strategy is centred on developing the aircraft, validating its performance and building out a broader autonomous-drone portfolio.

The timing reflects a wider change in agriculture. Labour shortages, rising machinery costs, pressure to use farm inputs more efficiently and the need to operate across increasingly challenging field conditions are creating room for autonomous systems that can perform repetitive tasks with less dependence on conventional equipment.

If the IQ Octo can translate its prototype specifications into reliable field performance, ZenaTech could have a platform capable of serving more than one market. Agriculture provides an immediate use case in spraying and seeding, while future solar-maintenance capabilities could extend the aircraft into another growing infrastructure market.

For now, the next milestone is straightforward: getting the prototype into the field. The results of those tests will determine how quickly ZenaTech can move the IQ Octo toward commercial deployment and whether its DaaS model can turn autonomous agricultural operations into a scalable recurring business.