

# Drone Operator

! DID YOU KNOW DRONES CAN COVER A HECTARE - 2.5 X FOOTBALL FIELD - OF FARMLAND FASTER THAN ANY TRACTOR OR PICKUP TRUCK CAN?



Agtech Career Series in partnership with

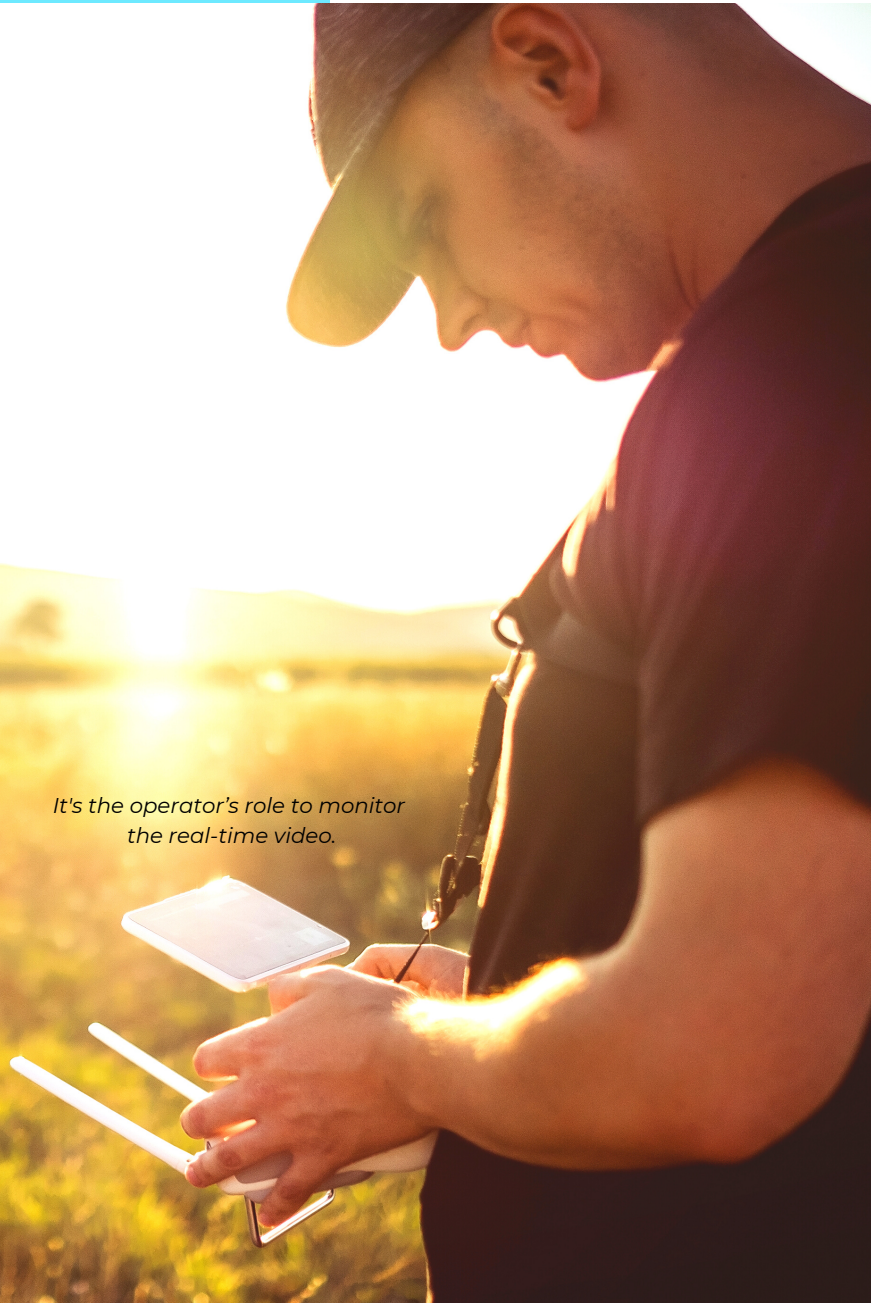


## Agricultural Drones Collect Information As They Fly That Can Be Useful for Farm Management

*They can also be a valuable security and safety tool to catch intruders, wild animals, or livestock that have wandered away. A drone can fly across several hundred hectares of land using one battery! And this all takes just a few minutes! As such, drones can be scheduled or used when needed. A drone can even be built with thermal cameras, which allows surveillance to occur at night when things are extra quiet on the farm. A great time to make discoveries!*



*It's the operator's role to monitor the real-time video.*



Hands On



Problem-Solving



Technical

# Drone Uses in Agriculture

## DRONES CAPTURE A NEW LINE OF SIGHT HELPING FARMERS TO BETTER VISUALIZE THEIR FARM

### DRONE USES

If the farm you are working with is on the larger side, drone swarms can be used. This eliminates the need for manual flight and helps extend the scope of the drone surveillance system.

One of the primary uses of drones in agriculture is for precision agriculture. Here, drones are used to gather and observe data, which can then evaluate crop health. Because each data point has a spatial dimension or corresponding spot on the farm, operators can use drones in targeted remediation. This means things like fertilizer, irrigation, or pest control can be allocated precisely where and when needed. Precision agriculture is a data-driven approach to farming and ultimately can assist the farm to operate more efficiently.

Drones can have multispectral sensors, which are a lot like cameras, but they detect energy outside the visible light spectrum. These sensors can be used to detect and record energy at different frequencies. And the data collected here can be further manipulated, combined and studied to help farmers better understand their crops' health.

### HERE ARE SOME OTHER IMPORTANT APPLICATIONS OF AGRICULTURAL DRONES

- Land mapping
- Livestock management
- Crop spraying
- Soil and field analysis
- Seed planting
- Irrigation monitoring and management



*What other things do you think drones could be used for on a farm?*

# Job Description

DRONE OPERATORS OR DRONE PILOTS ARE RESPONSIBLE FOR OPERATING DRONES OR UNMANNED AERIAL SYSTEMS (UAS)

## DUTIES

- Checking drones to ensure proper and safe operation
- Making sure the weather is agreeable for safe flights
- Documenting pre- and post-flight logs
- Monitoring the drone during flight
- Planning drone flight routes
- Navigating the drones along their designated paths
- Gathering information
- Producing aerial photographs
- Testing, troubleshooting and maintaining equipment

## SKILLS

- Precise attention to detail
- Ability to multitask
- Excellent electronic and mechanical skills
- Good problem-solving abilities
- Strong communication skills

## TASKS

- Working as a **consultant** to offer land evaluation and action-based farm improvement maps based on thermal and advanced imaging
- Creating **automated systems** to help handle planting, spraying, and routine crop management
- Working as a **contractor** to regularly monitor crops, spray and produce analyses for maximizing farm yields
- Working with **large agricultural operators** who need a dedicated drone pilot
- Developing **studies** on plant/crop survival/viability based on different climatic conditions

## Requirement

To work as a drone operator, you will need to take an online exam. If you pass the test, you will receive your Pilot Certificate. To stay certified, you need to keep your skills up to date. You can either retake the exam every two years, successfully pass a flight review, or complete additional training activities.

## Tip

To be a great drone operator, you must be focused on maximizing yields, minimizing costs, and future-proofing farms. The field of agricultural drone work is still young, so with the right training and passion for the area, you can be a large part of a farm's transformation toward becoming more sustainable and profitable.

## Salary

\$46,742 - \$81,431 or \$32 per hour