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Global Tech Distribution Limited sources, stocks, and distributes agricultural products leading manufacturers and globally renowned. By establishing partnerships with DJI, the company ensures a diverse range of high-quality and innovative products for its clients.

With DJI Agriculture industry-leading drone products and years of technical expertise, Global Tech is able to work with its clients to create an aerial application ecosystem centered on talent growth, product improvement, pesticide optimization, and technological advancement. The wide range of DJI Agras products such as the T-series and MG-series agricultural drones, P4 Multispectral, Phantom 4 RTK, DJI Terra and DJI Agras App, are used globally and favored by customers worldwide.





Why Agricultural Drones

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Agriculture Pain Points Worldwide

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Manual Spraying:

Time-consuming,
Labor-intensive,
High health risk due to direct contact
with chemicals



Tractors:

Crop crushing leading to economic loss,
Limited Access Area,
Time-consuming



Helicopters:

Expensive,
Low precision

Agricultural Drones: the Problem Solver

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More Agricultural Scenarios

Agricultural drones can fulfill needs of versatile scenarios such as paddy field, orchard, high-stem crops (to avoid crop crushing).

Safer Operations

Lower labor intensity, Avoid direct contact with chemicals

Higher Efficiency

Manual operation: 0.067 ha/hour

Drone operation: 16 ha/hour

Care-free & Cost effective

Manual: high turnover rate, high cost, difficult to monitor the result

Drone: Save water, Save Chemicals, Easy to monitor the operation progress and results



The unique advantage of agricultural drones is that they are easy to deploy and use, and are suitable for crops such as rice, corn, cotton, and fruit trees. Especially in mountainous areas, and paddy fields where it is difficult for manual or traditional agricultural machineries to enter the ground.

Why Agricultural Drones

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Agricultural drones play an important part throughout the life cycle of crop, especially during the seedling and management process.



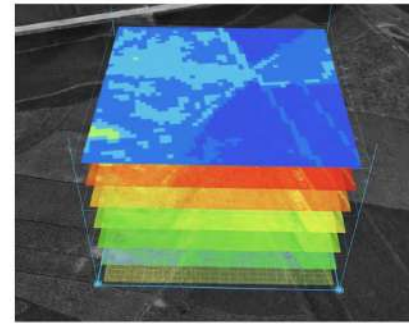
Granular Spreading

DJI Agricultural drones are suitable for multiple application scenarios, such as grassland reseedling, granular fertilizer spreading, and spreading feed for aquatic animals like fish and shrimp. Installation of the spreading system can be completed in under three minutes, proving that Agras drones are always ready for the task at hand.



Crop Spraying

DJI Agricultural drones spray more accurately and evenly thanks to their automated features and precision spraying systems. Agricultural drones can effortlessly operate over challenging terrain that is typically hard for large machines, such as tractors and fixed-wing aircraft. Moreover, agricultural drones save chemicals and water, which effectively minimizes the risk of chemical run-off and ensures the conservation of water resources.



Crop Health Monitoring

Farmers can use DJI aerial platforms such as the Phantom 4 RTK and P4 Multispectral imaging system to gather precise crop data, perform diverse agricultural tasks, monitor the environment, and more.



Field Mapping/Surveying

Manual mapping has become a thing of the past with the DJI Phantom 4 RTK, which performs aerial mapping 100 times faster than manual operations. The entire mapping process is displayed on screen, ensuring that planning and editing are done accurately.



How Improving Farmland Management With Intelligent Digital Agriculture Solutions

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AGRAS T50

Ready, Set, Go.



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All Scenario Adaptability

- Automatic and Manual Orchard Mode
- Variable Rate Application
- Terrain Following up to 50°



High Flow Rate

- Spraying 16 L/min
- Spreading 108 kg/min
- Smooth spreading, doubled torque of the spreader



Signal Stability

- Offline Operations
- 2 km O3 Video Transmission
- Optional DJI Relay



Multidirectional Obstacle Sensing

- Multidirectional Obstacle Avoidance
- Automatic and Manual obstacle bypassing
- Front and Rear Active Phased Array Radars
- Two Sets of Binocular Vision Sensors



Four Sprinkler Kit (Optional)

- Reverse Directional Spray
- 4-Sprinkler Spraying 24 L/min[2] Flow Rate
- Smooth spreading, doubled torque of the spreader
- Fast Disassembly and Cleaning

AGRAS T40

One For All



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Improved efficiency with coaxial twin rotor design

- 11 m spray width
- Field operation efficiency of 21.33 hectares/hour
- Orchard operation efficiency of 4 hectares/hour
- Spreading efficiency of 1.5 tonnes/hour



Omnidirectional Sensors for Greater Safety

- Obstacle avoidance with Active Phased Array Radar + Binocular Vision
 - 360 ° Omnidirectional Obstacle Sensing, intelligent terrain following
 - Radar detection range of 50 m
 - 3D terrain following ensures smooth flight over complex terrain
- ## Versatile, perfect for mapping or spraying/spreading
- FPV ultra-HD 12MP camera
 - Adjustable gimbal angles for real-time data acquisition
 - Works with the D-RTK 2 Mobile Station for mapping
 - Automatic detection of boundaries and obstacles



Large-screen controller for easy mapping

- Coverage of 6.67 hectares in 10 minutes
- Intelligent flight path planning to minimize wasted journeys
- Large 7-inch high brightness screen
- Octa-core processor for smoother operation



Superior dispense rate of 12 L/min

- Magnetic transmission design, prevention of chemical corrosion
- Two atomizing centrifugal sprinklers for even spraying
- Proprietary centrifugal valve to prevent leakage
- Real-time monitoring of pesticide levels to estimate when reload is needed



12000W Multifunctional Inverter Generator

- Latest electrojet technology for greater fuel savings
- Supports 1500W AC output
- 1,500 charge cycles, fast charging in 9 minutes

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*The parameters on this slide were measured using a mass-produced AGRAS T40 in a controlled environment. For specific parameters, please visit: <https://www.dji.com/t40>.

AGRAS T20P

Superior Performance at Best Value

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Light and nimble

- 7 m spray width
- Field operation efficiency of 12 hectares/hour
- Orchard operation efficiency of 2.67 hectares/hour
- Spreading efficiency of 1 tonne/hour



Increased flight safety with omnidirectional sensors

- APAR + binocular vision obstacle avoidance
- 360° Omnidirectional Obstacle Sensing, intelligent terrain following
- Radar detection range of 50 m
- 3D terrain following ensures smooth flight over complex terrain



Large-screen controller for easy reconstruction

- Map reconstruction for 6.67 hectares in 10 minutes
- Intelligent planning to avoid over or empty load
- 7-inch bright large screen
- Octa-core processor for smoother operation



Superior dispense rate of 12 L/min

- Magnetic transmission design, insulated protection against chemical corrosion
- Two atomizing centrifugal sprinklers for even spraying
- Proprietary centrifugal valve to prevent leakage
- Real-time monitoring of pesticide levels, estimates when reload is needed



Versatile, perfect for surveying or spraying

- FPV ultra-HD 12MP camera
- Adjustable gimbal angles for real-time data acquisition
- Map reconstruction possible without internet connection
- Automatic detection of boundaries and obstacles



Cost saving on power and fast charging

- 6kW variable-frequency multifunctional charging station
- Charging module detachable, can be plugged into utility power
- 13,000mAh Intelligent Flight Battery for up to 1,500 charge cycles
- 9-minute ultra-fast charging with two batteries

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*The parameters on this slide were measured using a mass-produced AGRAS T20P in a controlled environment. For specific parameters, please visit: <https://www.dji.com/t20p>.

AGRAS T30

A New Flagship for Digital Agriculture



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Autonomous operations with high quality and efficiency

- 30L tank and 9 m spraying width
- 16 spray nozzles with a high rate of 8 L/min
- Operation efficiency of 16 hectares/hour
- One-button take-off, intelligent planning, and automatic edge sweeping
- The real-time level meter matches pesticide and battery capacity to reduce cost and improve efficiency



Designed for long-term service

- IP67 Dust and Water Protection
- Triple protection for core modules
- Strong and reliable truss-type drone body
- Board-level protection against water and corrosion



Safety focus

- Spherical obstacle avoidance system for all-round perception
- Intelligent detour and autonomous terrain adaptation
- Front and rear cameras for real-time monitoring
- High-brightness searchlight for low-light work
- Designed for harsh weather operations



Transforming body enables effective spraying through thick canopy

- Branch targeting technology for penetrating thick canopy
- Improves the effectiveness of fruit tree spraying by 100%
- Even application of pesticides



Large tank capacity for efficient spreading

- 40 kg spreading tank for 7 m spreading width
- Spreads 1 ton of fertilizer per hour
- Real-time weight monitoring for accurate empty-tank alarm
- Washable and corrosion resistant



Integrated variable frequency charging station

- The charger is also a generator
- A high power of 7200W
- A 25L fuel tank enables charging of 42 batteries
- One-key electric starting



Two batteries and quick charger facilitate easy reuse

- 29,000mAh battery for 1000 ultra-long cycles
- Charge on landing with no cooling required
- 7200W charger for 10-minute ultra-fast charging
- Adaptive power for safer charging



In-cloud farming and digital agriculture

- Create maps in the cloud for visual management of plots
- Field patrol by drones and crop condition monitoring by AI
- Variable-amount spraying and spreading operation for higher production and lower costs
- Supervision on agricultural machinery operation and traceability of fertilizers and pesticides

*The parameters on this slide were measured using a mass-produced AGRAS T30 in a controlled environment. For specific parameters, please visit: <https://www.dji.com/t30>.

AGRAS T10

The Ideal Drone for New Farmers

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Compact but powerful

- 10L tank and 5 m spraying width
- 4 spray nozzles with a flow rate of 2.4 L/min
- Covers up to 6.7 hectares of farmland per hour
- Flexible folding and easy transportation



Autonomous operation and precise application

- One-button take-off, intelligent planning, and automatic edge sweeping
- Transmission up to 5 km
- Dual-channel, high-precision electromagnetic flow meter
- RTK centimeter-level high-precision positioning



Rapid refilling for efficient spreading

- 10 kg spreading tank and 7 m spreading width
- Covers 5.6 hectares of farmland each hour
- Real-time weight monitoring for accurate empty-tank alarm
- Washable and corrosion resistant



Two batteries and quick-charger facilitate easy reuse

- 9,500mAh battery for 1000 ultra-long cycles
- Charge on landing with no cooling required
- 3600W charger for 7-minute ultra-fast charging
- Adaptive power for safer charging



Safety focus

- Spherical obstacle avoidance system for all-round perception
- Intelligent detour and autonomous terrain adaptation
- Front and rear cameras for real-time monitoring
- High-brightness searchlight for low-light work
- Designed for harsh weather operations



Designed for long-term service

- IP67 Dust and Water Protection
- Triple protection for core modules
- Strong and reliable truss-type drone body
- Board-level protection against water and corrosion



Integrated variable-frequency charging station

- The charger is also a generator
- High power and efficiency
- A 9L fuel tank enables charging of 30 batteries
- One-button electric start.



In-cloud farming and digital agriculture

- Create maps in the cloud for visual management of plots
- Field patrol by drones and crop condition monitoring by AI
- Variable-amount spraying and spreading operation for higher production and lower costs
- Supervision on agricultural machinery operation and traceability of fertilizers and pesticides

*The parameters on this slide were measured using a mass-produced AGRAS T10 in a controlled environment. For specific parameters, please visit: <https://www.dji.com/t10>.

SPREADING SYSTEM 3.0

Large Capacity, Washable, and Corrosion Resistant

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70L

70L spray tank capacity



Fertilizer spreading

A 40L spreading tank increases the amount of fertilizer spread in a single flight, thus improving the spreading efficiency.

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1.5 t/h

High dispense rate



Rice seeding

With fully automatic spreading featuring high spreading uniformity, guaranteed budding rate, and large adjustable flow range, drones can provide efficient and uniform spreading of Indica type hybrid rice and conventional breeding in cold regions, with different seeding amounts per hectare.



Quick refill within 3 minutes

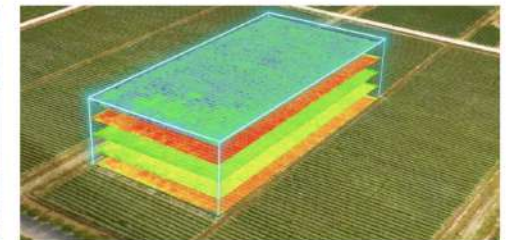


Feed spreading

In fish, shrimp, and crab aquaculture, feed must be spread very frequently, which is time-consuming and laborious. Drones can spread feed precisely and more efficiently and are easy to operate.



Suitable for various work needs



Variable spreading

Variable spreading by Phantom 4 Multispectral Edition can achieve efficient and precise spreading, saving fertilizer and time while increasing production and revenue.

Mavic 3M

See More, Work Smarter



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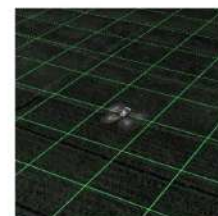
Multispectral Camera

- Green (G) 560nm $\pm$ 16nm
- Red (R) 650 nm $\pm$ 16 nm
- Red edge (RE) 730 nm $\pm$ 16 nm
- Near-infrared (NIR) 860 nm $\pm$ 26 nm
- Built-in sunlight sensor for more accurate NDVI results



RGB Camera

- 4/3 CMOS 20MP image sensor
- 1/2000 mechanical shutter speed, which effectively avoids rolling shutter
- High-speed burst at 0.7s when RGB camera is used



Ultra-long battery life, Efficient Mapping

- 43-minute cruise time in a single flight
- Complete mapping operations over an area of 200 hectares in a single flight
- Complete terrain-follow orchard mapping operation in a single flight



Accurate images that capture every pixel

- RTK module for centimeter-level positioning
- Microsecond-level time synchronization



Safe and Stable

- 15km Transmission Distance
- Supports 4G Enhanced Transmission
- Omnidirectional obstacle avoidance



Open Ecosystem

- Cloud API, which can be directly connected to a third-party cloud platform

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- The parameter values listed in this article are all measured by the T25 (mass-production version) in a controlled test environment.
- Please visit the website for specific product specs: <https://ag.dji.com/cn/mavic-3-m>

DJI TERRA

Make the World Your Digital Asset



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Effortless mapping with flexibility

DJI Terra allows users to add waypoints to draw a polygon as target areas and flexibly adjust flight paths as desired, plan a mission and set desired flight parameters to cover various needs.

*The mapping altitude for farmlands and orchards can be decided based on the weather and conditions on the ground. Frequently used mapping altitudes are: 150m or above for farmlands, and 80m or above for orchards.

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Fast imagery acquisition

DJI Terra collects imagery of target areas and stitches them into actionable maps in real time.

*FCC standard, measured in an open outdoor environment without interference

*Measured using common mapping parameters for farmland scenarios, at an altitude of 180 m.



Simplified workflow for easy planning

Marking of boundaries, obstacles, calibration points are all done on the DJI Terra interface.



Supported aircraft types

Works with Phantom 4 RTK with its RTK precision positioning, 1-inch 20MP CMOS sensor, and DJI's signature OcuSync 2.0 HD transmission technology.

DJI Agriculture Data Platform

Data Management and Analysis

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Comprehensive data monitoring



Big data analysis

Provides historical operation data for comprehensive display and analysis, based on criteria such as locality, aircraft, operation status, pesticide quantity used, etc. Statistical analysis can be performed for data recorded at any stage, to extract further data value.

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Farmland mapping in HD

High precision farmland mapping with all operation details at a glance



Full-chain quality control

Able to conduct pre-operation parameter setting and standardization of pilot operations, issue warning alerts during a mission, and generate "sand table" analysis after an operation with features on the DJI Agras Management Platform in order to perform quality control and assessment in a closed loop.

Real-time equipment monitoring

Able to monitor drone operations under the name of the aircraft owner, and conduct central monitoring of operations across a province, city or county.



Supports third-party access

Provides standardized data ports that enable access by third-party intelligent agricultural machinery.

Historical data tracing

Real-time upload of traceable data for multiple drone models, operating modes, and scenarios

Multi-level access management

Provides multi-level access management for companies, government agencies, and large plant protection organizations.



Open ecosystem partnership

DJI Agriculture is keen to work with all organizations to share resources and data, and provide users with customize services and on-premise deployment; To create an intelligent agricultural ecosystem by leveraging data under the existing operational framework.

DJI Agriculture Management Platform

Empowering Your Plant Protection Operations

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Comprehensive management, efficient operation

Comprehensive mission management system that enables you to coordinate work and assign tasks quickly. After completing map reconstruction and flight planning on DJI Terra, the mission can be sent directly to the drone controller to be carried out, which can increase operation efficiency. Land information can be applied repeatedly and across multiple missions when shared by your team, enhancing operation efficiency.

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Operation records with precise reports

Powerful data tools capable of generating precise charts and tables for easy inspection of the operation status. Precise data offer a reliable basis for mission analysis; multi-criteria data search provides a quick glance of pilot and drone status; supports daily mission reports and team ranking, supplying data for team performance management.



Seamless management of team equipment

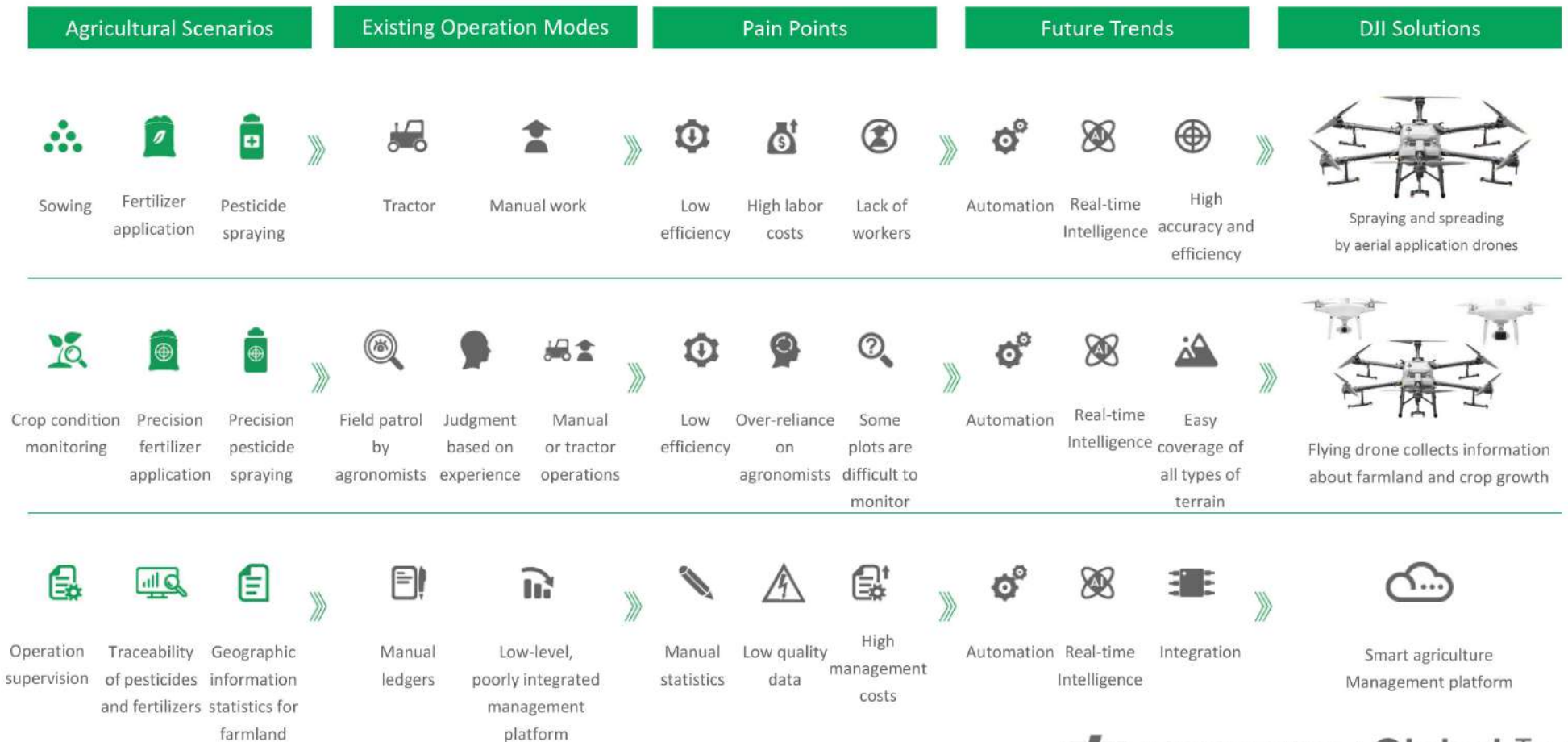
The access management system has been optimized according to applications, so that drones can be used by different teams as needed under the same platform account, allowing greater flexibility in team equipment management.



Order platform connecting customers and suppliers

Farmers can post their job requests seeking quotations while agricultural service providers can accept orders on the platform. This bridges the communication gap between both parties and makes discussions more efficient.

DJI Agriculture's three solution lines, Spraying & Spreading solutions, Field & Crop Monitoring, and Smart Agriculture Platform, help farmers at every stage of managing their farms





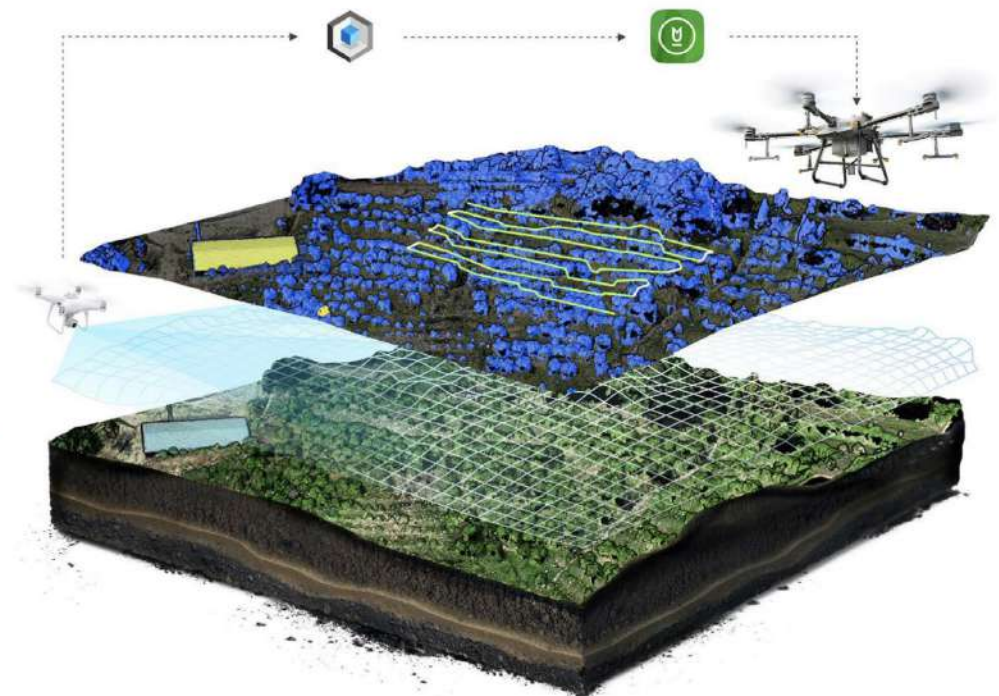
Smart Agriculture

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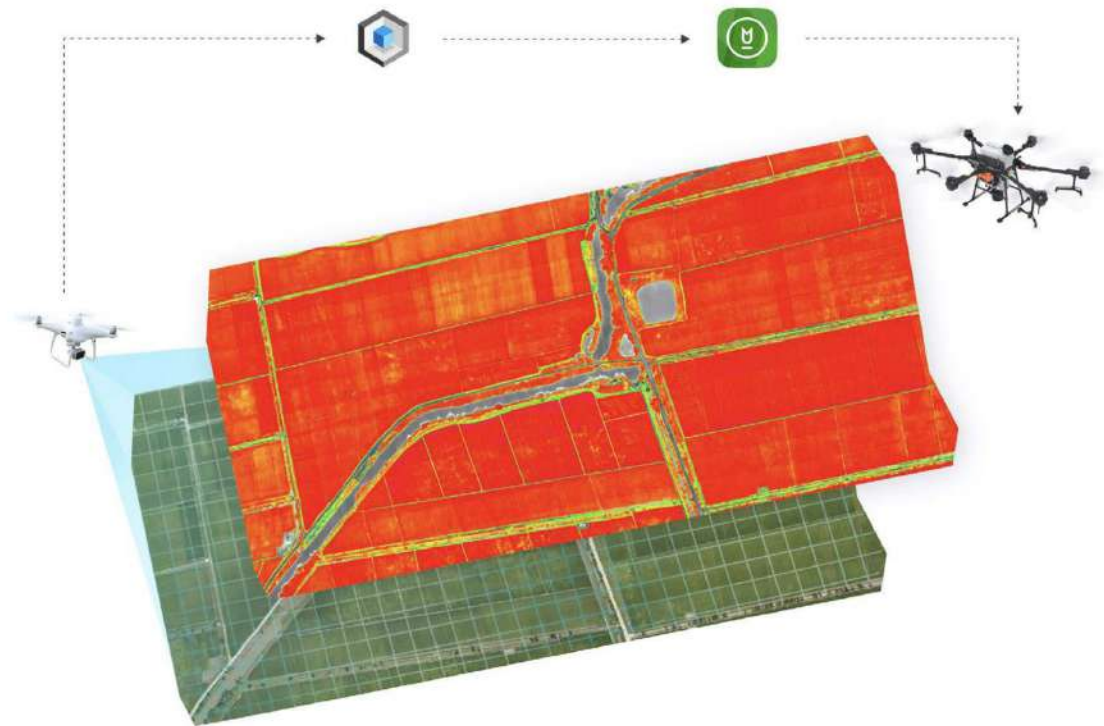
Whether working on large farms, hillside orchards, steep terraces, or expansive grasslands, DJI Agriculture's smart solutions will always have you covered.

3D Flight Planning (Orchard Mode)

Navigating challenging terrain is now easier, thanks to digitized farming methods. The DJI Phantom 4 RTK can scan and map target areas to identify all aspects of a field. In Orchard mode, DJI Agras drones can identify each tree, generate 3D flight routes based on their shapes, and conduct efficient spraying.



This agricultural solution package is designed to monitor crop health and generate treatment procedures. P4 Multispectral scans target areas and generates multispectral charts that provide actionable insights into crop health and help formulate variable spraying and seeding maps. Users can access DJI Terra shapefiles and apply them to spraying and seeding operations.



Supporting Services

Comprehensive warranty for users

DJI Agriculture has after-sales service centers nationwide that provide regular repair and maintenance support for agricultural drones. Users can visit any of our centers and are available across 33 provinces and autonomous regions to enjoy for DJI's professional after-sales services.



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DJI Care AGRAS

DJI provides free repairs for all equipment damage not due to human causes during the DJI Care warranty period to mitigate loss for users.



UTC Training Academy

Professional courses combine theory and practice that educate agricultural drone users on aerial applications and increase the professional skills of operators to promote the healthy development of the industry. Opened to all drone users and learners, the UTC Training Academy offers comprehensive practical training covering agricultural drones, pesticides, crops, as well as plant protection team workflows and technical operation standards, allowing students to grasp the essential knowledge and skills quickly.

1. Students can access theories and knowledge through the online learning system to prepare for practical training.
2. After completing the theoretical components, students will undergo practical training by a licensed instructor.
3. Students who have passed the exams will receive a "Agricultural Drone System Operator Certificate."



Digital Agriculture in Action

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At present, DJI Agriculture, by integrating existing equipment and solutions, can build more efficient closed-loop applications based on Land Leveling, Seedling Analysis, Growth Analysis, Variable Fertilizer Application, and Production Monitoring. These applications increase both yield and revenue.

FERTILIZER CONSUMPTION

REDUCED BY 10%

YIELD INCREASED BY 10%



Experimental site: An agricultural reclamation company in Jiangsu



Deployed content: Geographic Information System, Agricultural Machinery Supervision System, and Precision Planting Management System



Project benefits:
RMB 2,790,000 / 1,000 hectares

In 2019, DJI Agriculture applied its solutions to the tillage, planting, management, and harvesting of the company's rice fields. We supervised the quality of agricultural machinery operations, improved efficiency by patrolling the fields with drones, and implemented variable spreading solutions, reducing costs and improving efficiency. In the past, manual field patrol could cover 67 hectares per day, but now a Phantom 4 Multispectral drone can patrol 667 hectares per day.

Farm GIS from DJI Agriculture



Identifies Boundaries and Captures Information

The boundaries, which have electric fences are shown in yellow. Within the electric fence, the operation information is captured automatically.

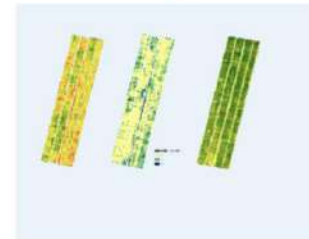
Agricultural Machinery Supervision System from DJI Agriculture



Real-time Monitoring for Rapid Allocation

With the agricultural machinery monitoring system, we monitor the operation quality of agricultural machinery during tillage, planting, management, and harvesting.

Refined Farming Solution from DJI Agriculture



Precise Identification for Variable Operation

Variable spreading enables high-efficiency refined farming, which reduces chemical fertilizer consumption by 10% (saving about RMB 240,000 per 1,000 hectares), increases yield by 10% (increasing revenue by about RMB 1,800,000 per 1,000 hectares), and can replace 15 workers per 1,000 hectares (saving about RMB 750,000).

Digital Agriculture in Action

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**3X EFFICIENCY
AND
VISIBLE EFFECT**



Experimental site: A cotton planting
enterprise in Xinjiang

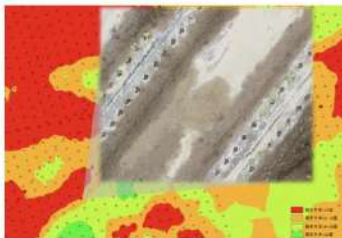


Deployed content: Precision Farming
Management System



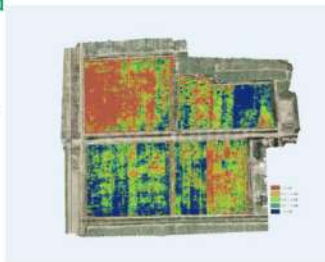
Project benefits:
RMB 1,192,500 / 10,000 hectares

In 2020, DJI Agriculture, cooperating with Syngenta's China Smart Agriculture Platform, provided digital agriculture solutions for its customer, a cotton planting company in Xinjiang, deploying a precision planting management system. The digital agriculture solution, including emergence detection, plant height monitoring, growth monitoring, and other features, effectively guided the precision application of water, fertilizers, and pesticides for the cotton and allowed for variable operations for alkali spots and variable spraying of defoliant. The results show that DJI's digital agriculture solutions make labor more efficient, increase production and planting efficiency by over 300%, and reduce costs. This ultimately helps to lower expenditures and increase revenue.



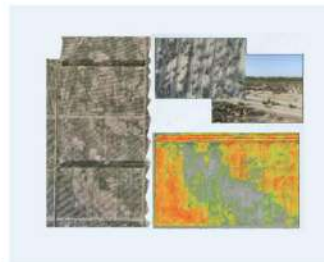
Emergence Monitoring and Benefit Comparison

Conventional manual spot checks of seedlings: Each person can inspect the seedling sprouting rate of two sample sites per hour, with each sample about 6.7 m² in size. Monitoring by DJI Agriculture drone: The whole field sampling and monitoring operation covers over 66.7 hectares/hour/person, and the monitoring results are representative of the overall situation. This can guide precision seedling supplementation and adjustment of subsequent management measures, such as calculations of pesticide, water, and fertilizer inputs.



Plant Height Monitoring and Benefit Comparison

Plant height monitoring is conducted once a week, and the results are mainly used to guide the application of pesticides, water, and fertilizers for cotton. The figure shows the plant height monitoring results. Conventional manual spot checks: The plant height sampling efficiency is about 3 sample points/hour/person. Monitoring by DJI Agriculture drone: >66.7 hectares/hour/person, the plant height monitoring accuracy is >90%, and the whole plot can be monitored. Combined with variable spraying by T20 aerial application drones, this solution allows for precision control, lower costs, and higher efficiency.



Cotton Alkali Spot Monitoring and Operation

DJI's Phantom 4 Multispectral drone identifies alkali spots in cotton fields, and its variable operation function allows you to spray pesticides in specific areas only, reducing pesticide usage. For example, given a 16-hectare experimental field with an alkali spot area of 14.5%, and a defoliant dosage of 22.5 L/ hectare, the variable spraying saves 54.4 L in total or 3.3 L/hectare (37 yuan/hectare).

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DJI Agriculture Case Studies

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Case Study | Weeding Wheat Field

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For this mission, we were tasked with eradicating weeds in a 53-hectare winter wheat field in Xianggu Farm, Zhucheng, Shangdong province, which were mainly the broadleaf variety, namely flixweed, and shepherd's purse. The weather was sunny with the temperature ranging between 5°C and 17°C (note: The temperature may impact the efficacy of pesticides, so herbicides is recommended when the optimal temperature is 8-10°C). The wind was blowing north at force 3, which was acceptable for the mission (note: avoid operating drones in winds stronger than force 3).



Pesticide info:

The weeds in the wheat field were mainly the broadleaf variety, namely flixweed, and shepherd's purse. Therefore we opted for Ruichaomai as the pesticide.

Pesticide name	Dosage form	Composition	Quantity used per hectare
Ruichaomai	Diluted particulate solution	10% halauxifen-methyl 10% florasulam	75 g/ha

Important: The granular solution must be prepared using the dual dilution method. First, add minimal water and stir the pesticide until granules are complete dissolved into suspended particulates; then add a moderate amount water followed by the auxiliary, mix them evenly and then transfer it into the drone's spreading tank.

Mission parameters:

We performed an inspection 10 days after the operation. The weeds withered and yellowed with some already dead while the growth of the wheat was not affected. The mission was successful.

Operation mode	Flight Path Planning	Flight speed	6 m/s
Flight altitude	2 m	Operating distance	6.5 m
Quantity used per hectare	15 L	Sprinkler type	XR11001VS

Case Study | Weeding Wheat Field

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Case Study | Treating Citrus Disease

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Yongxing in Hunan province is a major producer of rock sugar orange and suffers mainly from plant afflictions such as citrus leafminers, Asian citrus psyllids, and citrus scab. As the oranges mostly grow on the hilly terrain, we used AGRAS T16 for the mission. First, the plant protection team conducted a 2D scan of the entire orchard using a Phantom 4 RTK to map out the terrain and identify obstacles. Then they reconstructed the map and planned the 3D flight paths on DJI Terra.



Manual protection of citrus plants is not effective and sometimes lacks workers. The AGRAS T16 drone has really solved the challenging issue of plant protection for us, and the results are great.

—— Local fruit farmer

Pesticide info:

Pesticide name	Dosage form	Composition	Quantity used per hectare
Pukechu	Suspending agent	4% avermectin 24% spirotetramat	375 ml/ha
Nong Ge	Suspending agent	50% fluazinam	600 ml/ha
Mei Chu	Emulsifiable concentrate	50 g/L of lufenuron	750 ml/ha

Mission parameters:

Given a higher spread penetration force required by orchard operations and the steep terrain, we used the Orchard Mode with a spreading rate of 45 L per hectare.

Operation mode	Fruit Tree Mode	Flight speed	3 m/s
Flight altitude	2 m	Operating distance	4 m
Quantity used per hectare	45 L	Sprinkler type	XR11001VS

Case Study | Cotton Defoliation

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Defoliants are sprayed in autumn during the cotton blooming season. The cotton in Xinjiang was growing well this year. As some of the plants were bent towards the ground, making the cotton fields inaccessible to tractors, so drones became the best tool for farmers for spraying defoliants. The Haisen Plant Protection team, consisting of 26 members, brought 15 AGRAS MG-1S drones to the cotton fields in Changji, Shihezi, and Hami in Xinjiang to carry out cotton defoliation missions. "By using drones, we can make sure the chemicals are spread evenly. It reduces wastage, increases efficiency, and saves cost. You can spray 33.33 hectares of a large, organized and centralized cotton field, with one drone per day," said Shan Tao from Haisen Plant Protection.



The Haisen team sprayed 4,000 hectares of a cotton field using drones. For this mission, they covered 2,000 hectares, and the results are obvious. Local cotton farmer Yin Bing said: "Before this, it took three of us several days to spray the chemicals over 40 hectares with tractors. In the process, we might also crush some of the plants, which impacted our yield. Drones are harmless to the crops, cause no damage, and save time. I think we will be using drones moving forward."

——Local cotton farmer

Pesticide info:

Two spreading missions were planned based on the conditions of the crop. This was the second mission. The following is the information on the pesticide used.

Pesticide name	Dosage form	Composition	Quantity used per hectare
Thidiazuron & Diuron	Suspending agent	360 g/L of thidiazuron 180 g/L of diuron	450 g/ha
Ethrel	Aqueous solution	40% ethrel	80 ml/ha

Mission parameters:

We used the Flight Path Planning mode given the need for defoliants to be spread evenly on cotton plants, and also considering the partially irregular terrain.

Operation mode	Flight Path Planning	Flight speed	5 m/s
Flight altitude	2 m	Operating distance	4 m
Quantity used per hectare	15 L	Sprinkler type	XR11001VS

Case Study | Treating Citrus Disease

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Green tea is produced in many places in China, primarily in provinces such as Zhejiang, Henan, Guizhou, Jiangxi, Anhui, Jiangsu, Sichuan, Shanxi (Shannan), Hunan, Hubei, Guangxi, and Fujian. Each year in May, the green tea cropping in Lanxi, Zhejiang province suffers from aphids, which are a bane to summer and autumn tea plants and cause their budding leaves to curl up and their tips and edges to wither, while also stunting their growth. The pests are a huge menace to the output and quality of tea production. To improve their crop protection efforts, the farmers from Zhu Village of the Yongchang subdistrict, Lanxi approached Yuedong Plant Protection in May, and agreed on the use of AGRAS MG-1P drones to eradicate aphids in their tea plantations.



This mission was a success. The infestation was under control. With the drones, we were able to spray pesticides more efficiently on the plantations. This addressed the issue of inefficiency with manual labor and helped improve plantation treatment using mechanized solutions. The farmers were impressed with the agricultural drone service.

—Mission conclusion

Pesticide info:

We used a 40% suspending agent of dibutyl ether and thiacloprid, which was effective against aphids, along with the auxiliary Hongyuyan, which boosted its effect.

Pesticide name	Dosage form	Composition	Quantity used per hectare
Dibutyl ether & Thiacloprid	Suspending agent	40%	600 g/ha
Hongyuyan	/	/	10 ml

Mission parameters:

Apart from irregular terrain and areas with obstacles which require the Manual Mode, the A-B Route Mode can be used to perform autonomous flights for any neatly organized plantation area, which improves efficiency significantly.

Operation mode	Manual Mode A-B Route Mode	Flight speed	2.5 m/s
Flight altitude	2 m	Operating distance	3.9 m
Quantity used per hectare	30 L	Sprinkler type	XR11001VS

Case Study | Treating Infestation with Astragalus

Astragalus is a perennial herb. Its plant is 50-100 cm tall. It is grown in many places across China, primarily in Inner Mongolia, Shanxi, and Heilongjiang. In the ancient classic *Shennong Bencaojing*, astragalus was listed as a “superior medicine”. Its roots can be made into medicine and carry a sweet taste. They are known to have good diuretic properties and used for treating diarrhea, swelling, and ulcers. Astragalus grow on over 6,000 hectares of land on the Yunzhong Mountain in Xinfu district, Xinzhou, Shanxi province. However, the plants were afflicted by aphids which targeted the tender shoots and undermined their growth. Nearly every shoot was full of the insects.



We used a P4R drone for mapping and the Fruit Tree Mode for the hilly terrain. The entire operation took six days to complete (mapping with P4R for one day + spraying mission for five days). Two people were sufficient for the operation, and the spraying was done evenly. “Fruit Tree Mode 3.0 has a powerful terrain following function that can enable fully autonomous operation. The aircraft can fly smoothly even over steep slopes.”

——Mission conclusion

Pesticide info:

Effective ingredients	Quantity used per hectare	Function
5% emulsified concentrate of imidacloprid	450 ml/ha	Systemic pesticide, with contact and stomach poison action.
30% thiamethoxam suspending agent	60 g/ha	Effective, mildly toxic nicotine pesticide, with stomach and contact poison and systemic pesticide action.
Maifei auxiliary	225 ml/ha	Low-capacity aerial spray auxiliary, induces sedimentation, adhesion and prevents vaporization.

Mission parameters:

Model	T20	Flight speed	2 m/s
Relative height of crop:	2 m	Operating distance	4 m
Quantity used per hectare	75 L	Sprinkler type	Teejet TXVK04
Operation mode	M+ Mode		

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The image shows two DJI agricultural drones in flight over a vast, hilly landscape. The sun is low on the horizon, creating a warm, orange glow across the sky and the scene. The foreground is filled with dense green vegetation, likely a field of crops. The background features rolling hills and mountains under a soft, hazy sky. The text "Better Growth Better Life" is centered in the upper half of the image.

Better Growth Better Life

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