

# Innovation & Advantage of Drone Sprayer



**Drone Precision Spraying System  
(DPSS)**

**VS**



**"...when you are trying something new, hard, or innovative, failure is not only inevitable, but it is also sometimes necessary ..."**

# Future of Farming? Precision Spraying!





# What is Drone Precision Spraying System?

## . A intelligent Flight Controller

Provides reliability during flight, When used with the Intelligent Operation Planning System and the Agriculture Management Platform, a user can plan operations, manage flights in real-time, and closely monitor aircraft operating status. Its algorithm has been optimized for agricultural utilizations, ensuring stable flight even with sloshing liquids. If an error occurs in one sensor, the system will automatically switch to the other sensor to continue safe, reliable flight.

## . A precision spraying system

A new spraying system enables more accurate spraying. With compatible pumps controlling nozzles, The new pressure sensor and flow sensor monitor the spraying rate in real-time, realizing dynamic control over spray speed and amount during operation. Nozzles with extended spray booms have been used to make better use of downward airflows. This spraying system responds accurately to commands, adding accuracy and effectiveness to spraying operations.

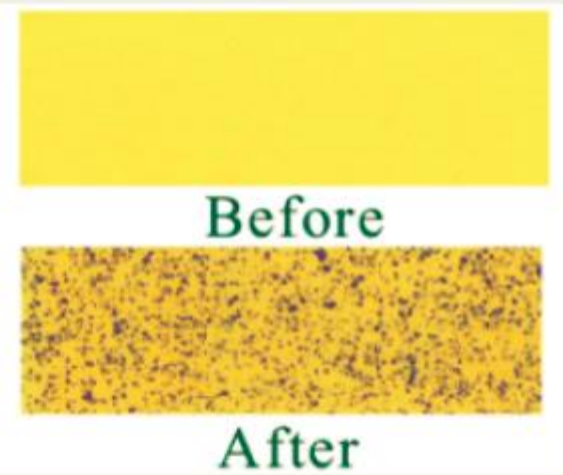
## . A professional Platform and Ground station

Advanced SHTT Spread-spectrum Technology  
Dual Receiver Interconnected / Dual Redundancy / PWM Channel Expanding  
Parameter Adjustment on PC

# Comparison of Drone Sprayer

Drone Sprayer	Knapsack sprayer	Tractor sprayer	Elevated spraying vehicle
20-25 hectares/day	0.8-1.3 hectares/day	6.7-20 hectares/day	66.7-80 hectares/day

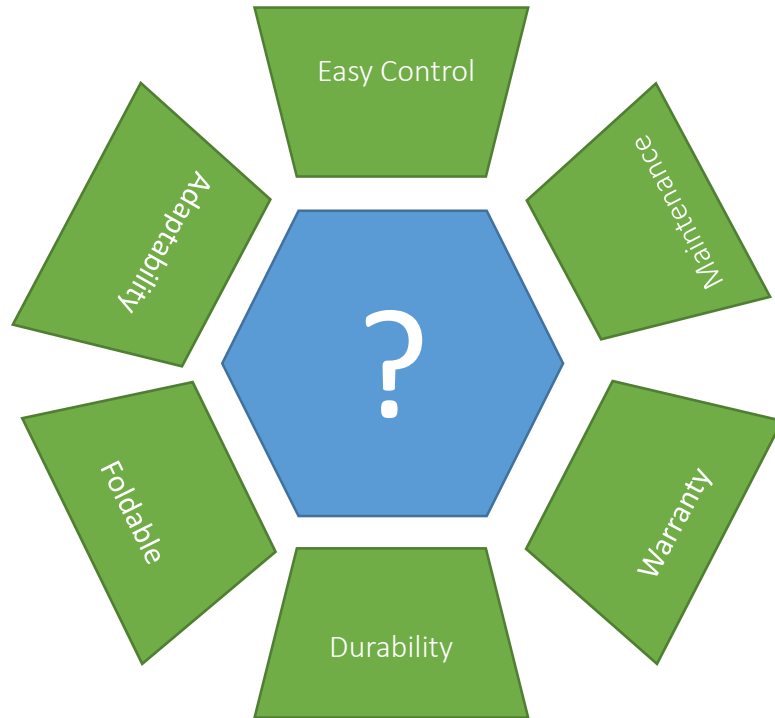
## Test Effective Picture Of Spraying



# Advantage of Drone Sprayer

Compare	Drone	Knapsack sprayer	Tractor sprayer	Elevated spraying vehicle
<b>Pesticide utilization efficiency</b>	85%	30%	30%	30%
<b>Adaptability</b>	mountain, hilly terrain and paddy field.	Crop, flower and fruit are easily damaged, trampled or dropped by human.	Can't work in mountain or hilly terrain.	Can't work in mountain or hilly terrain.
<b>Water consumption per hectare</b>	Spraying uniformly with low dilution rate and high concentrated liquid pesticide, the water can be saved up to 90%	Traditional immersion jet spraying, resulting in waste of water, and most of the pesticides lost into the soil along with water.	Traditional immersion jet spraying, resulting in waste of water, and most of the pesticides lost into the soil along with water.	Traditional immersion jet spraying, resulting in waste of water, and most of the pesticides lost into the soil along with water.
<b>Safety</b>	Away from field during spraying to avoid the pesticide poisoning	Pesticides enter human body by mouth, easily lead to pesticide poisoning.	Applying pesticide from close range, easily lead to pesticide poisoning.	Applying pesticide from close range, easily lead to pesticide poisoning.

# Question?



## \*Easy Control

Intelligent flight with autopilot

## \*Adaptability

mountain, hilly terrain adopt worldwide country

## \*Foldable

Foldable frame, easy to transport

## \*Durability

Mature flight controller for agricultural UAV

## \*Maintenance

Modularization design, easy disassembly

## \*Warranty

Complete warranty policy

# Function of Drone Spraying System ?

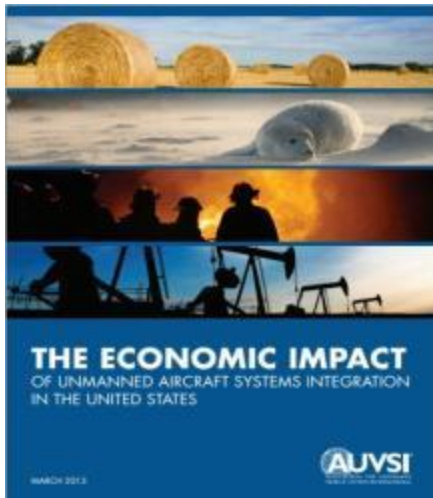
- **Foldable frame, easy to transport**
- **Intelligent flight with autopilot**
- **Intelligent flight memory, record break-point**
- **Adjustable spray flow rate**
- **Adjustable altitude and fly speed**
- **Fail-safe, auto fly when out of control**
- **Low voltage warning and auto return to base**
- **Empty tank warning and auto return to base**
- **Terrain following with MMW radar**
- **Digital fence**
- **Software(ground station and manage platform)**
- **Add obstacles**
- **Multi-way charger**



# UAV and Precision Agriculture

Precision agriculture totals approximately **80%** of the potential commercial market for UAV

UAV in agriculture has the potential to have an **\$11 billion** economic impact in the first three years following integration. Almost **\$66 billion** over 11 years.



*“Precision application, a practice especially useful for crop farmers and horticulturists, utilizes effective and efficient spray techniques to more selectively cover plants and fields. This allows farmers to provide only the needed pesticide or nutrient to each plant, reducing the total amount sprayed, and thus saving money and reducing environmental impacts.”*

# Future Potential



**USA TODAY**  
A GANNETT COMPANY

Search

NEWS SPORTS LIFE **MONEY** TECH TRAVEL OPINION 55° GAMES SCORES STOCKS VIDEO MORE

## Growing use of drones poised to transform agriculture

Christopher Doering, USATODAY 7:18 a.m. EDT March 23, 2014

WASHINGTON — Drones are quickly moving from the battlefield to the farmers' field — on the verge of

Curious About Reverse Mortgage?

(Photo: Robert Blair, AP)



**defenceWeb**  
Africa's leading defence news portal

Home Portals News By Country Virtual Press Offices Resources Gallery Events

## Crop-spraying drones promise to change agriculture

Written by defenceWeb, Monday, 21 May 2018

in t f



Drones are being touted as a real game changer in one of agriculture's most hazardous environments – crop spraying.

Ballito-based company Pacsys (Precision Agriculture Systems) is the sole distributor for DJI's crop sprayer drone, or unmanned aerial vehicle (UAV) the Agras MG-1, which can carry a payload of up to 10 kg of fertiliser or pesticide covering up to 10 000 sq m in 10 minutes – up to 60 times faster than manual spraying, according to its website.

But the topic of managing director Tim Wise's talk to attendees at DroneCon 2018 is not the drone versus manual labour, but rather the drone as an alternative to aerial crop spraying.

"Sugarcane is our biggest crop by area in KZN, but it's also conducive to drone crop spraying because the cane is planted in 2-3 hectare blocks. The drone isn't as effective up on the highveld where the blocks are far bigger," he says.



Sections | CX Flash | Audio | Latest | Caixin View

**Caixin**  
ENGLISH | 财经中文

SUBSCRIBE

Oct 10, 2017 07:15 PM BUSINESS & TECH

## Chinese Farmers Turn to Crop-Dusting Drones

By Li Liuqian and Li Rongde



The national government and provincial authorities across China have doled out millions in subsidies in recent years to farmers looking to buy drones, such as the one pictured above that is crop-dusting a wheat field in Shandong province. Photo: Visual China

RELATED

Capital of China's Industry Center Freewheeling Use Southeastern city of buzz schools or tourists don't go near airport

High-Flying Dron Getting Wings Cl Recent spate of scares prompt regulatory re



THANKS