



(a) The canopy-opening device, (b) Adjust the height between the canopy-opening device and the spray boom, (c) Adjust the horizontal distance between the canopy-opening device and the spray boom, (d) The spray boom, (e) The nozzle.

Figure.1. 3D model of the canopy-opening device.



Figure.2. Rice sampling field.

Table.1. The morphological structure parameters of rice.

<i>Average measurement of the whole rice</i>					
Dimensions	Average measurement				
	Leaf A	Leaf B	Leaf C	Leaf D	Leaf E
Distance from leaf root to bottom of stem (mm)	251.26	290.85	381.61	535.82	757.41
Leaf inclination (°)	20.58	19.02	15.69	11.16	8.86
Leaf length (mm)	455.38	559.22	535.00	459.72	371.15
Leaf area (cm ²)	91.75	120.43	123.89	110.29	92.62
Leaf width (cm)	2.84	3.08	3.38	3.44	2.22
Stem stalk diameter(mm)	9.40	9.27	8.19	6.62	4.56
Horizontal deflection angle from the first leaf(°)	128.57	44.00	186.63	129.47	
Plant height(m)			0.758		
Volume*(cm ³)			8.05		
Mass(g)			14.62		
<i>* Whole rice volumes have been calculated to frustum of a cone specimen density(specimen density:1815.69 kg m⁻³)</i>					

Table.2. Parameters of strain gage.

Type	BE120-3AA-P500
Resistance (Ω)	120.1±0.1
Gage factor	2.22±1%
Operating temperature range (°C)	-30~+80
sensing grid element size	2.8×2.0
Long × Width (mm)	
Strain gage substrate size	6.4×3.5
Long × Width (mm)	