LiCrop + LiPlant

Phenotyping Data Acquisition System & Software

LiCrop

LiCrop is a revolutionary phenotyping system developed by GreenValley International. LiCrop integrates a variety of sensors including LiDAR, RGB camera, multispectral, hyperspectral and thermal imaging. Custom mounting to agricultural scaffolding allows LiCrop to acquire highly accurate and precise information and measurement data.

LiDAR Specifications

Data Points Generated	97,600 points/second
Accuracy	±2 mm @ 25 m
Field of View	305°
Angular Resolution	±0.009°

RGB Imaging Specifications

Resolution	2448*2048 mm
Output	24bit RGB

Multispectral Imaging Specifications

Resolution	0.35 cm/pixel (5 m)
Field of View	47.2°
Bands	475nm, 560nm, 668nm, 840nm, 717nm

Hyperspectral Imaging Specifications

Hyperspectral Wavelength	450 nm - 950 nm

Thermal Imaging Specifications

Resolution	640*480 mm

LiPlant

LiPlant utilizes machine learning and GPU parallel computing to quickly process and analyze large datasets. The point cloud and imaging modules are able to extract crop parameters such as height, width, quantity of leaves, leaf length, leaf angle, canopy cover, leaf area index (LAI) and more. LiPlant is the perfect choice for precision agriculture.

Phenotypic Parameters

Crop Parameters	CHM
	Canopy Cover
	Leaf Area Density
	Individual Plant Segmentation
Plant Parameters	Height
	Crown Width
	Steam & Leaf Segmentation
	Leaf Number, Width, & Length
	Projected Leaf Area
	Total Leaf Area
	Volume

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