

DU-UBDTCE Arecanut Bunch Images Database

The DU-UBDTCE Arecanut Bunches Database for Arecanut research is constructed by collecting the Arecanut Bunch images with two levels maturity such as Ripened and Unripen. The database is collected at the, Bevinahalli village, Bharamasagara(P), Chitradurga District and Haladara village Arecanut Plantation at Davangere District, Karnataka, India.

DU-UBDTCE comprises Two sub-databases namely a Ripeness_Arecanut_Bunches and Unripen_Arecanut_Bunches. These sub-database in-turn it contains two sub-databases Input_Images and Ground_Truth_Images The brief description of the DU-UBDTCE Arecanut Bunches Database is given in Table 1.

Table 1: DU-UBDTCE Arecanut Bunches Database

Sl. No.	Arecanut Maturity Levels	Total Number of Samples	Description
1.	Ripeness	388	All Images are captured by using OPPO F3 Mobile phone with 16 Mega pixels camera.
2.	Unripen	629	All Images are captured by using OPPO F3 Mobile phone with 16 Mega pixels camera.

Purpose: The DU-UBDTCE Arecanut Bunches Database is meant to be used for research purposes and shall not be used nor included in commercial applications in any form (e.g., original files, encrypted files, files containing extracted features, etc).

Citation: All documents and papers that use the DU-UBDTCE Arecanut Bunches Database must acknowledge the use of the database by including the following reference.

R. Dhanesha, C. L. Shrinivasa Naika and Y. Kantharaj, “Segmentation of Arecanut Bunches using YCgCr Color Model”, 2019 1st International Conference on Advances in Information Technology (ICAIT), Chikmagalur, India, 2019, pp.50-53. doi:10.1109/ICAIT47043.2019.8987431.

Description of the DU-UBDTCE Arecanut Bunch Images Database:

Database consisting of 1017 images of Arecanut bunches which includes 629 unripen and 388 ripen bunches.

To acquire these images a mobile phone and a selfie stick were used. The mobile phone is OPPO F3 make with Android operating system, Octa core processor, 4GB RAM fitted with 16 megapixels rear camera. The selfie stick had folded length 5.31496 inches and extended length 28.7 inches.

Images are captured between 9 AM to 1 PM as relating to normal harvesting time of the farmer. A 50 cm approximate distance was maintained between the extended selfie-stick and Arecanut bunches. The mobile phone was fixed to selfie-stick holder which was at 45° orientation. The age of plant selected to capture images was between 7-9 years and height of plant was around 12-14 feet. An expertise was available to identify the maturity levels of Arecanut bunch. All images are resized into 256X256 and stored in jpeg format.

The Ripen Arecanut Bunches and respective Ground truth images are stored in JPEG format with a suitable naming convention as shown in Figure 1 and Figure 2 respectively.

I	P	_	R	I	P	_	0	0	0
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Figure 1. Naming Convention for Ripened Arecanut Bunch Images

G	n	d	T	r	_	R	I	P	_	0	0	0
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Figure 2. Naming Convention for Ground Truth Ripened Arecanut Bunch Images

IP → Input Images.

RIP → Ripeness Arecanut Bunch.

'_' → Underscore to Separate the terms.

000 → Numbering starts from zero.

GndTr → Ground Truth image with respect to Input images.

The Unripen Arecanut Bunch and respective Ground truth images are stored in JPEG format with a suitable naming convention as shown in Figure 3 and Figure 4 respectively.

I	P	_	U	N	R	I	P	_	0	0	0
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Figure 3. Naming Convention for Unripen Arecanut Bunch Images

G	n	d	T	r	_	U	N	R	I	P	_	0	0	0
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Figure 4. Naming Convention for Ground Truth Unripen Arecanut Bunch Images

IP → Input Images.

UNRIP → Unripen Arecanut Bunch.

'_' → Underscore to Separate the terms.

000 → Numbering starts from zero.

GndTr → Ground Truth image with respect to Input images.

Note: To get the unprocessed images (original images without resize) mail to ghaneshphddoc@gmail.com, we will share the images through google drive.