



**15<sup>TH</sup> NATIONAL  
CONVENTION  
ON STATISTICS**

03-05 OCTOBER 2022

Organized by the Philippine Statistical System  
Spearheaded by the Philippine Statistics Authority



# Determination of Dry Rubber Content of Rubber Cup Lump

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## Rationale



- The bark produces white sap called latex, its product is called natural rubber (NR) which has an elastic property;
- Provides high and regular income since it has low investment cost and allows intercropping of other crops for additional generating income;
- It also has a wide range of adaptability, long periods of productivity, environmental sustainability, and huge industrial demand



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# Rationale

## 1. Need for DRC information at the farm level

- The trading of cup lumps between rubber dealers and small holders normally occurred in remote places around the country involving small quantities of cup lumps;
- The price is determined purely based on its dry rubber content (DRC) commonly through visual observation by rubber dealers;
- This practice of determining DRC through visual observation combined with other price cut mechanisms imposed by rubber buyers has led to dissatisfaction among small holders during rubber trading.



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# Rationale

- There is no standard method available used by the rubber buyers in the industry for farm gate determination of cup lump DRC;
- DRC in rubber needs to be known by farmers and buyers at market time since the price depends on the DRC. Thus, it is essential to know the amount of DRC in the cup lumps before trading (*Jayanthi, 2005*);
- According to *Rittiron, 2017*, a system and method for quality measurement of cup lump DRC using Near Infrared (NIR) Spectroscopy is averaged to 70.32%;
- MRB, farm gate price of cup lump are at 50 percent DRC in Sabah and Serawak, Malaysia.



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## Rationale

### 2. Need for updating official statistics

- The PSA collects, generates, and disseminates production data for rubber in its raw form which is cup lump;
- The PSA regularly provides data to the Association of Natural Rubber Producing Countries (ANRPC) as input to Natural Rubber Trends and Statistics, using a 25 percent conversion rate from cup lump to dry rubber.
- The PHLRUBBER TWG raised concern on the PSA's use of a 25 percent conversion factor from cup lump to dry rubber as submitted to ANRPC, as the other member-countries use 50 percent.



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## Study Framework

### PROBLEM

PSA's use of a 25%  
conversion rate on DRC  
of cup lumps

- a. 25 percent conversion rate is not aligned with the internationally accepted computation of 50 percent used by the rubber industry
- b. Marketing system (price depends on DRC)

No data available

### INTERVENTION

Collection of  
secondary data  
for DRC  
Determination  
through Key  
Informant  
Interview (KII) in  
rubber processing  
plants.

### OUTCOME

Rubber cup lump  
DRC  
recommendation





# Objective

To address the issue of the DRC determination of rubber cup lumps of the natural rubber plantations in the Philippines

1. Determine the average dry rubber content of cup lumps of the natural rubber plantations in the Philippines;
2. Provide reliable data as a source for future research studies of the institute;
3. Address the issues and concerns to harmonize the conversion from fresh cup lump to Dry Rubber.



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## Methodology

“On-Site Validation” on three rubber producing provinces (Zamboanga Sibugay, North Cotabato, Bukidnon);

Validation was conducted at selected rubber processing plants.

Secondary data were collected from selected rubber processing plants;

Average recorded DRC per month from selected rubber processing plants were analyzed.



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## Results/Findings

Figure 1. Monthly Average DRC of Processing Plant No. 1: 2019

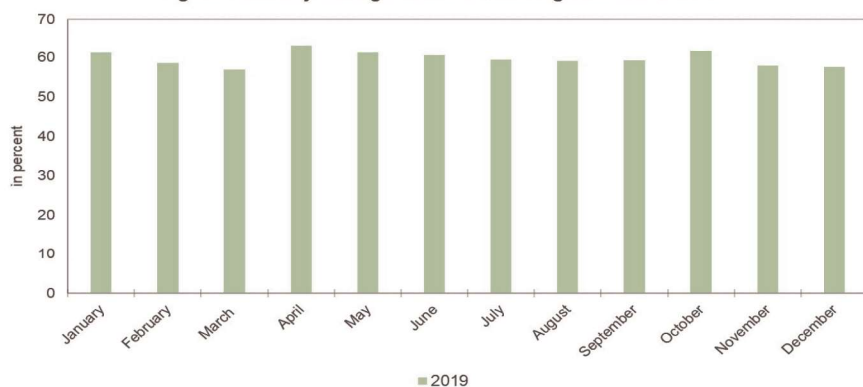


Figure 2. Monthly Average DRC of Processing Plant No. 2: 2017-2019

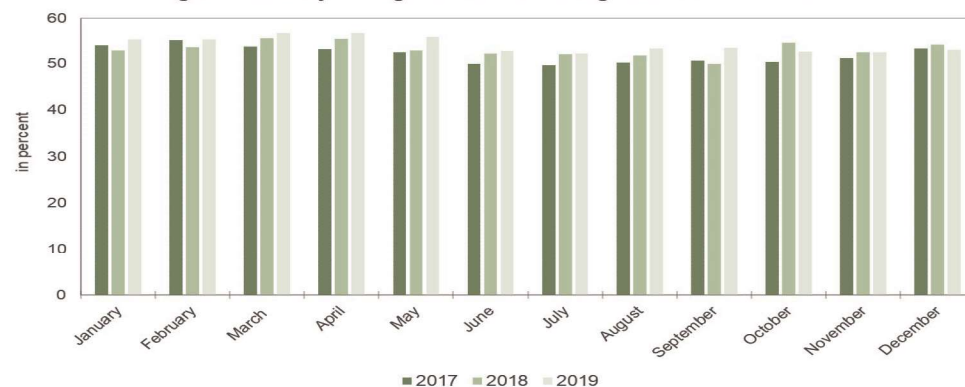
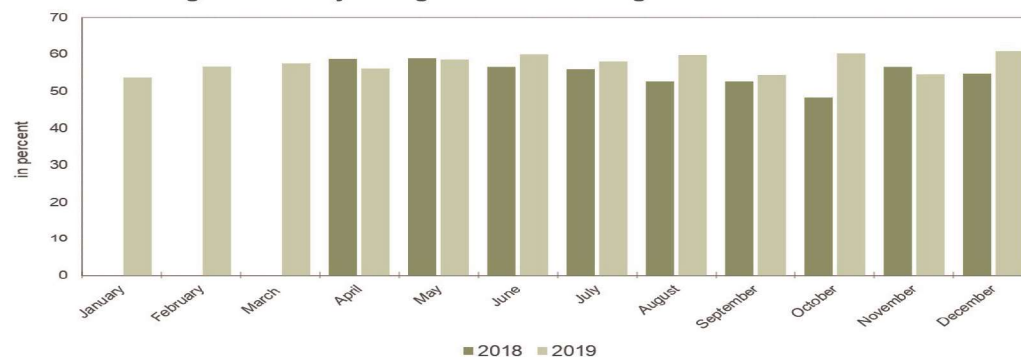


Figure 3. Monthly Average DRC of Processing Plant No. 3: 2018-2019



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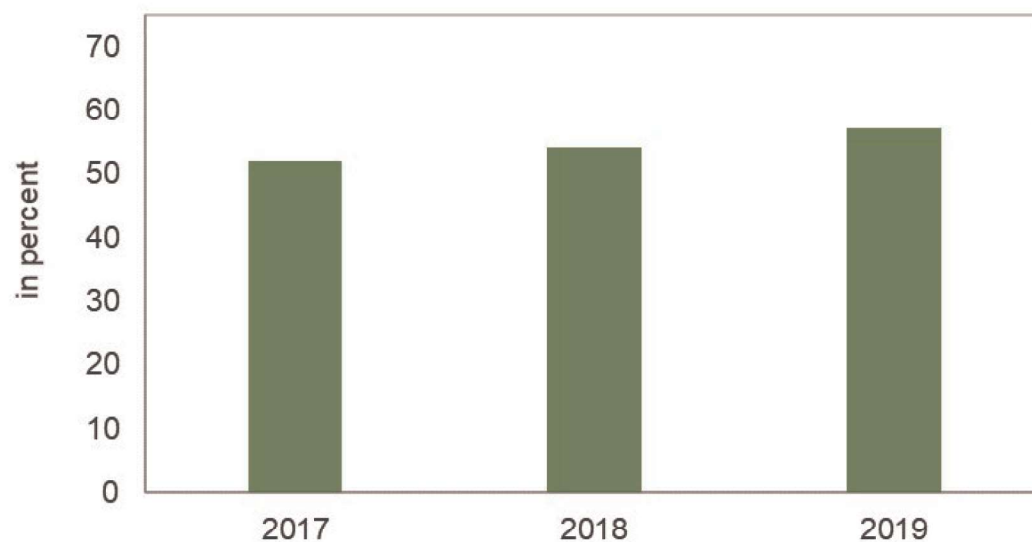
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## Results/Findings

Figure 4. Average Annual DRC: 2017-2019



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# CONCLUSION AND RECOMMENDATIONS

- 50% DRC should be used as the basis for the DRC conversion of Rubber Cup Lumps in the Philippines.

Accordingly, the PRRI recommends the following:

- Adopt the 50 percent conversion rate of DRC from 25%;
- PSA to maintain the cup lump product form of rubber in some reports as this is the form required in the valuation of production in agriculture; and
- PRRI to continuously research to update this conversion rate and provide updates to the PSA.







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## Documentations



*Courtesy call to Municipal Agriculturist of Maramag in Bukidnon, Ms. Amelyn M. Obial, together with representatives from PRRI and PSA (CO, RSSO 10 and Bukidnon)*



*Photo is taken in the Farma Rubber Industries, Makilala, North Cotabato together with the representatives coming from PSA Manila, PRRI and PSA NCot last September 23, 2019*



*Crump Rubber  
(Zamboanga Sibugay)*



*Creping Machine  
(Bukidnon)*



*Pile of cup lumps (North Cotabato)*



*Air-dried rubber sheets (Zamboanga Sibugay)*





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## Thank you!



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