

Commodity Intelligence Report

July 16, 2020

Malaysia Palm Oil: Lowest Production Since 2015/16 On Insufficient Rainfall and Reduced Fertilizer Inputs

For market year (MY) 2019/20 Malaysia palm oil output is experiencing one of the lowest production years since 2015/16 when El Niño resulted in drought-related yield losses (Figure 1). The main factors resulting in the decline in palm oil production are insufficient seasonal rainfall in 2019 coupled with reduced fertilizer application inputs, as fertilizer prices were higher than average. Though inconsistent seasonal rains occurred throughout Malaysia's main palm oil growing regions, Pahang and Sabah provinces were most notably impacted, having experienced the most drastic year-to-year declines in accumulated palm oil output. Pahang and Sabah represent two of the top four main producing palm oil provinces, with annual output accounting for typically 15 and 31 percent, respectively (Figure 2). Precipitation in the months of February through April 2019 in both Pahang and Sabah provinces failed to achieve the minimum water requirement to support palm oil yield potential, thus having a negative impact on palm oil output (Figure 3).

Palm oil productivity is highly dependent on rainfall and stable temperatures. To obtain average yields, palm oil monthly water requirements are between 150 to 200 millimeters, with minimum and maximum temperatures of 22 degrees and 33 degrees Celsius, respectively. In Malaysia, rainfall is generally year-round, however seasonal rains in the main palm oil regions are established at the beginning of the second quarter and become more pronounced in the fourth quarter of the year (Figure 4). Because of the oil palm tree's physiology, seasonal rains have direct impacts on palm oil output 9 to 10 months after rainfall has occurred. Palm oil output in Malaysia mainly accrues in the months of August through November. Though palm oil can withstand short stints of dryness, typically experienced in the off-season lower rain months, longer periods of dryness inhibit the effectiveness of flowering stages and result in substantial impacts to yields. Extended periods of dryness can impact yields and productivity up to 12 months after an extreme dry-weather event occurs.

Fertilizer management for palm oil is another factor which contributes to yield potential. Palm oil requires vast amounts of fertilizer applications, which is the largest production cost expense, attributing 60 to 80 percent of total production costs for large plantation owners and 30 to 40 percent for small shareholders. Trends indicate that the higher the cost of fertilizer the lower the amounts of fertilizer applied and consequently the lower the yield potential for the following crop cycle. This is particularly true for small shareholders. Small palm oil shareholders, who represent about a third of Malaysia's total palm oil output, lack sustainable methods of generating high yields due to inefficient farm management techniques and affordability of inputs. As a result, increases in production costs typically reflect in yield reductions.

With over half of the palm oil season complete, crude palm oil accumulated monthly output continues to trend at a lower-than-average pace according to the latest reports from the Malaysia Palm Oil Board (MPOB) (Figure 5). As of April 2020, MPOB monthly crude palm oil outputs from October 2019 through April 2020 are reported at 10.2 million metric tons, down 16 percent from last year's record pace and represent the lowest October to April accumulated output since 2015/16 when 9.8 million metric tons was collected. Aggregated monthly crude palm oil outputs (Oct-Apr) for Pahang and Sabah provinces indicate year-to-year declines of 24

and 20 percent, respectively. In short, the decreases in precipitation and reductions in fertilizer use are chiefly responsible for lower monthly crude palm oil output for MY 2019/20.

USDA estimates Malaysia 2019/20 palm oil production at 18.5 million metric tons, down 12 percent from last year. Harvested area is estimated at 5.35 million hectares, up 1 percent from last year. Yield is estimated at 3.46 tons per hectare, down 12 percent from last year (Figure 6).

The contributions from the USDA Office of Agricultural Affairs in Kuala Lumpur, Malaysia are gratefully acknowledged.

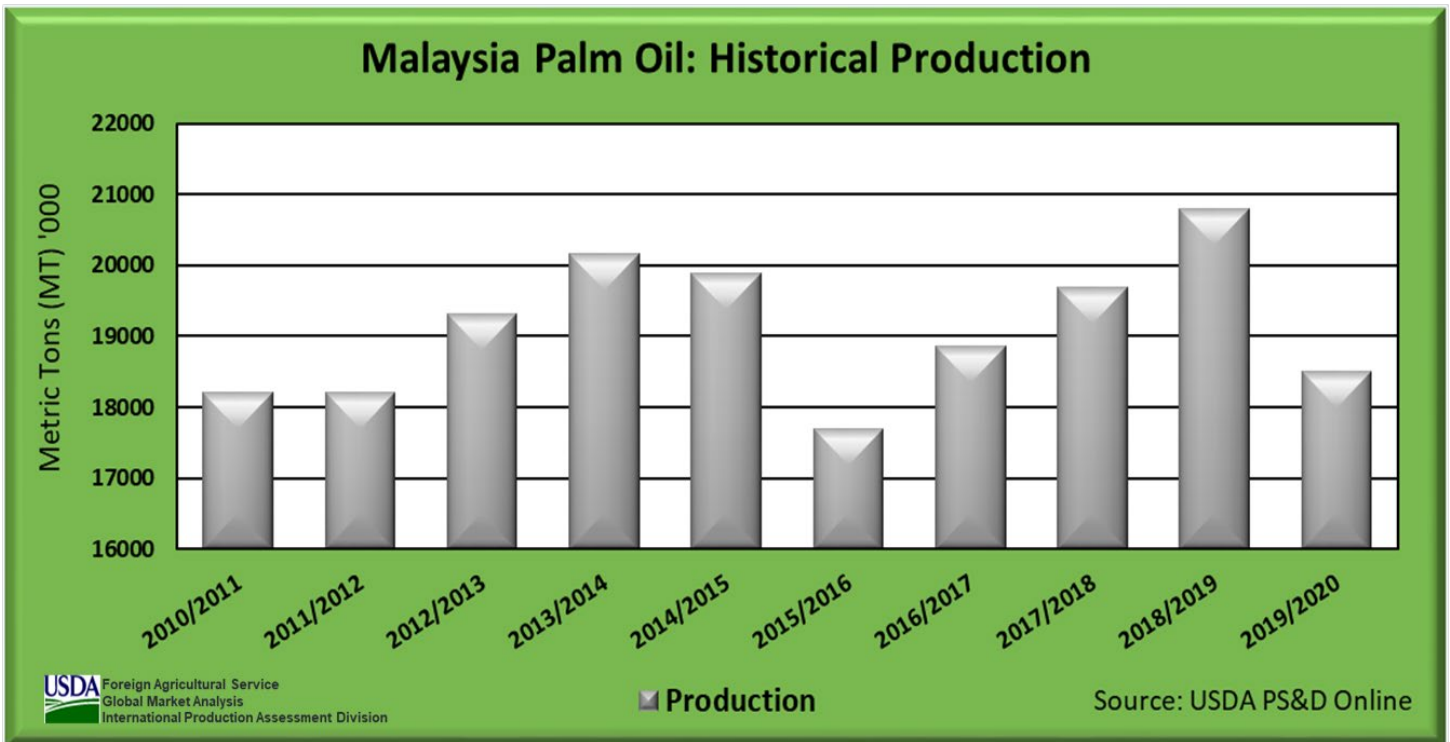


Figure 1: 2019/20 palm oil production is estimated the lowest since 2015/16

MALAYSIA: Palm Oil Production

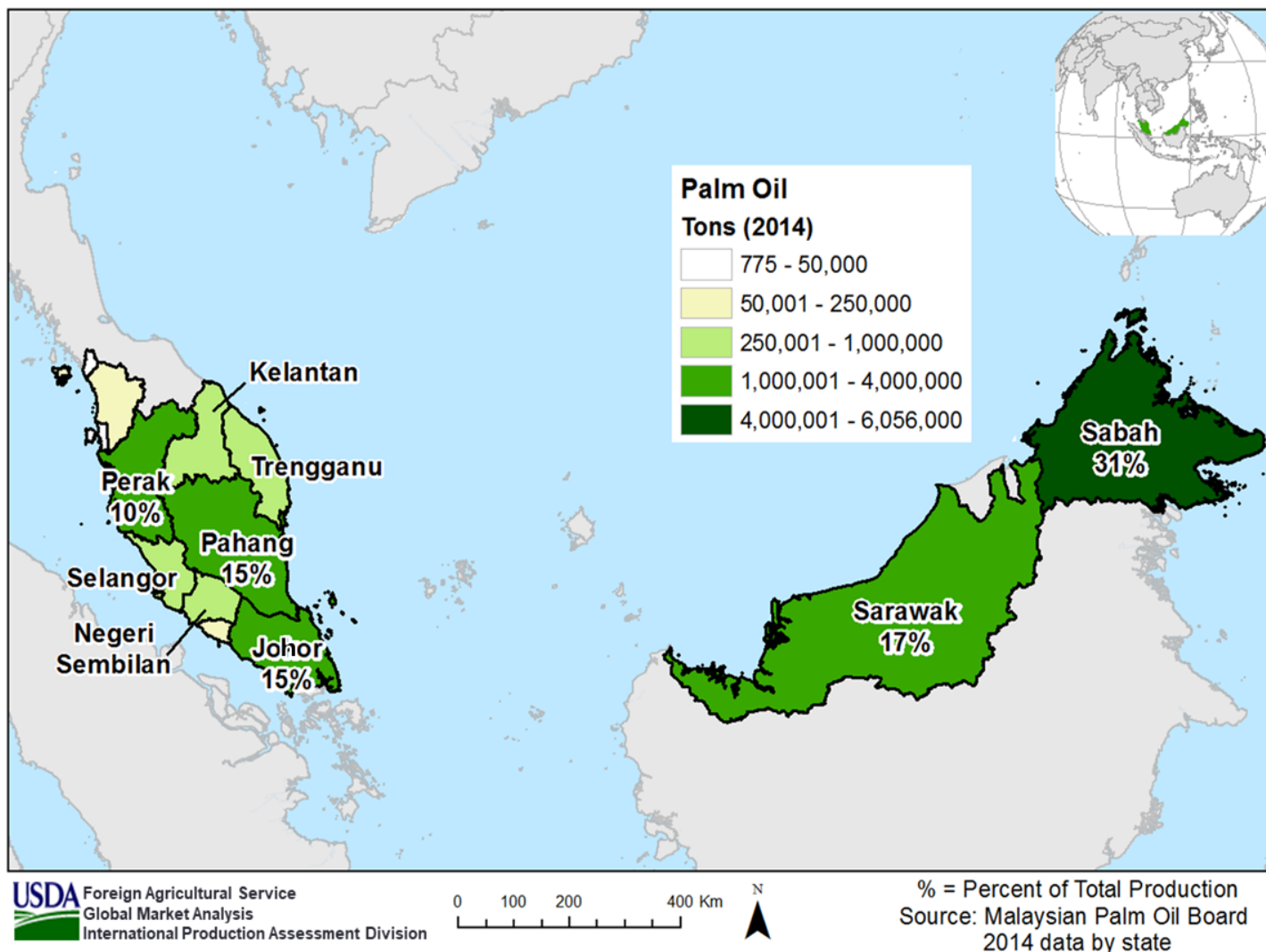


Figure 2: Sabah is Malaysia's top producing province

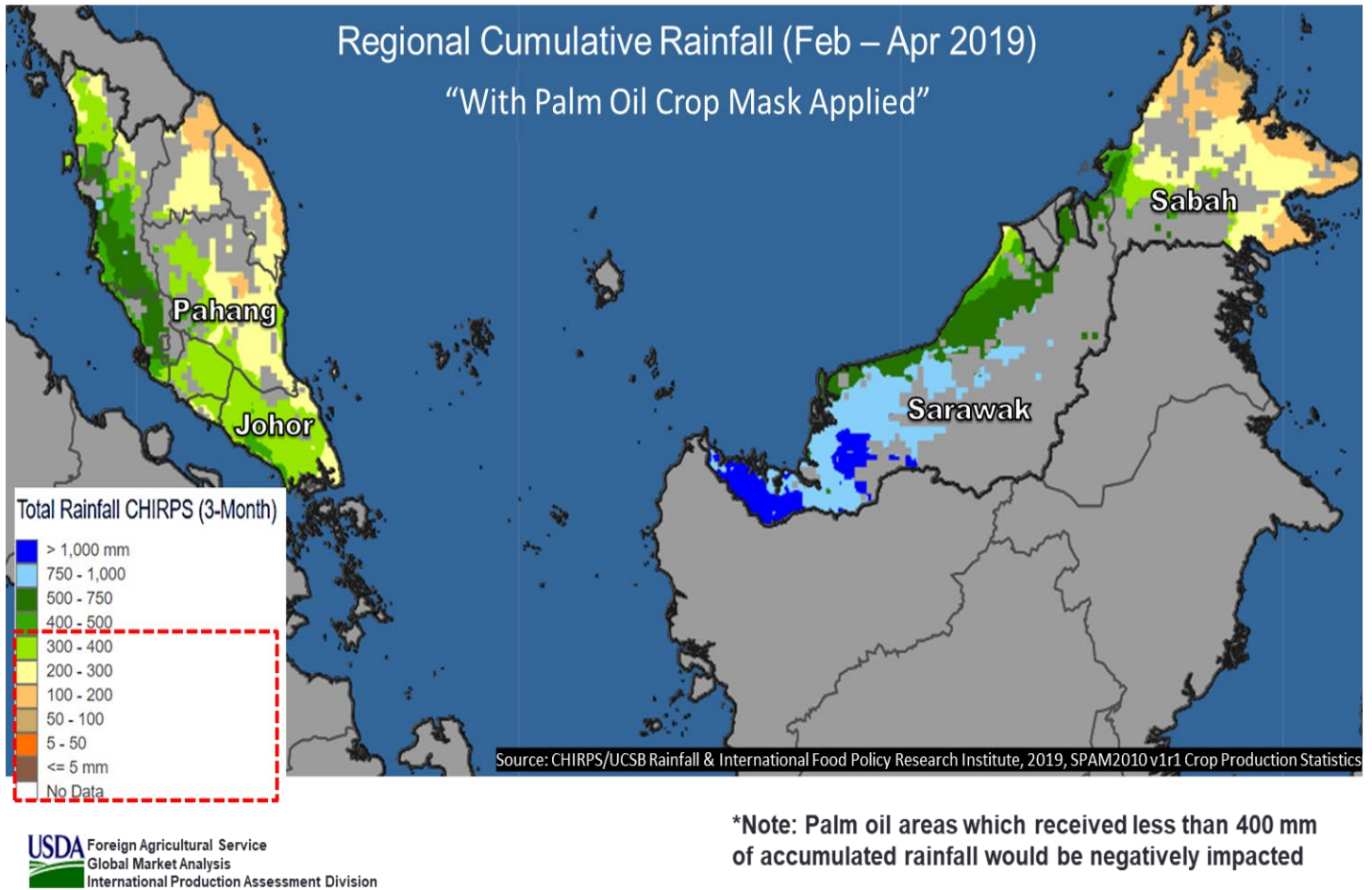


Figure 3: Pahang and Sabah provinces received reduced amounts of precipitation in 2019

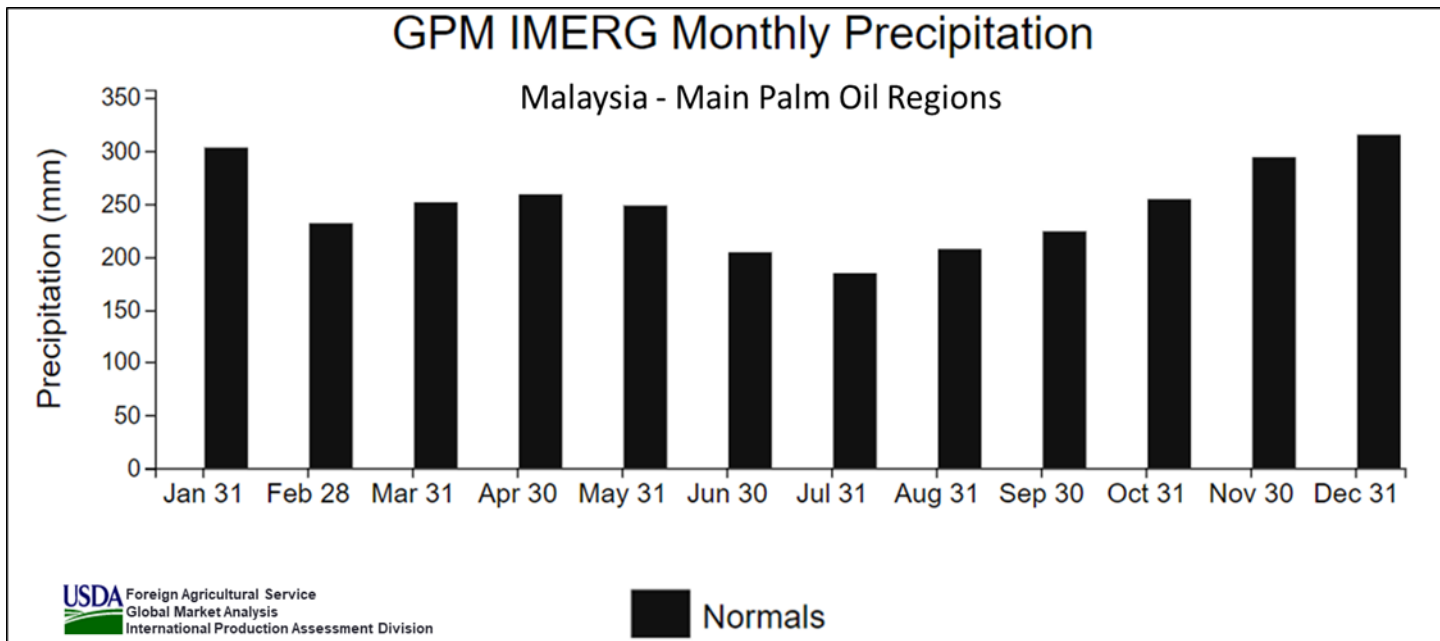


Figure 4: Monthly precipitation from NASA Global Precipitation Mission

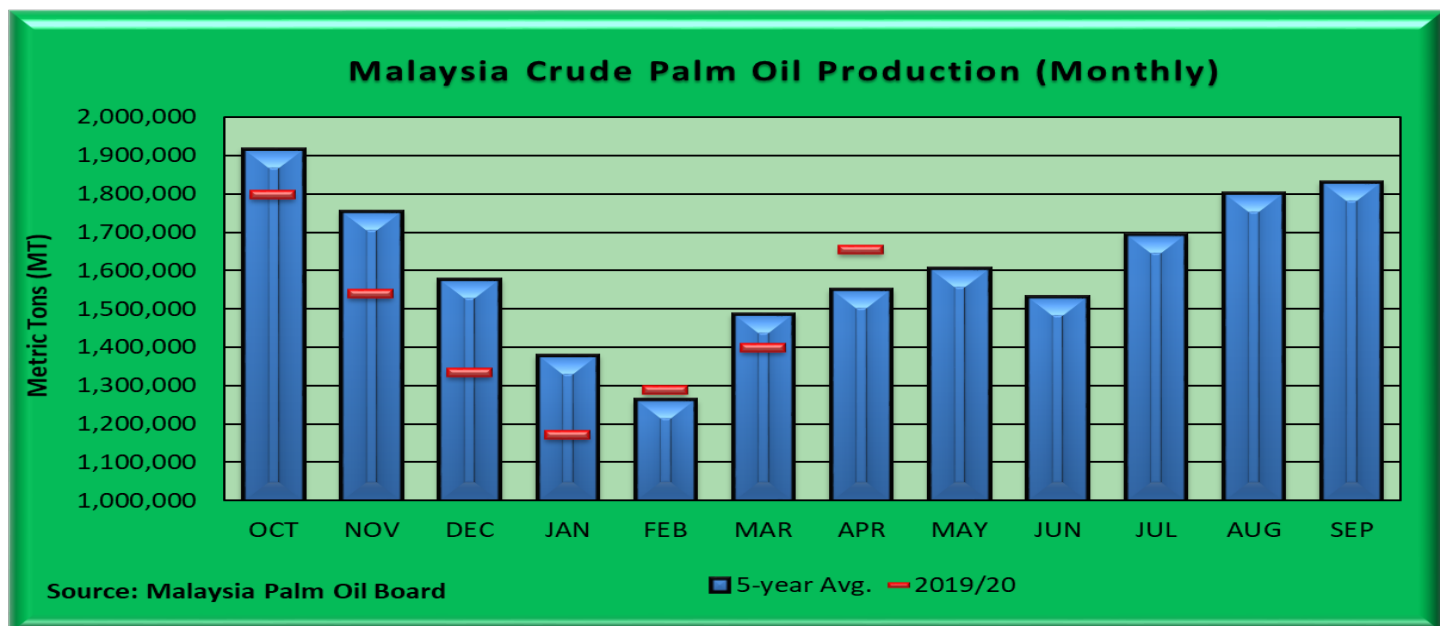


Figure 2: Monthly palm oil production has been mostly below average

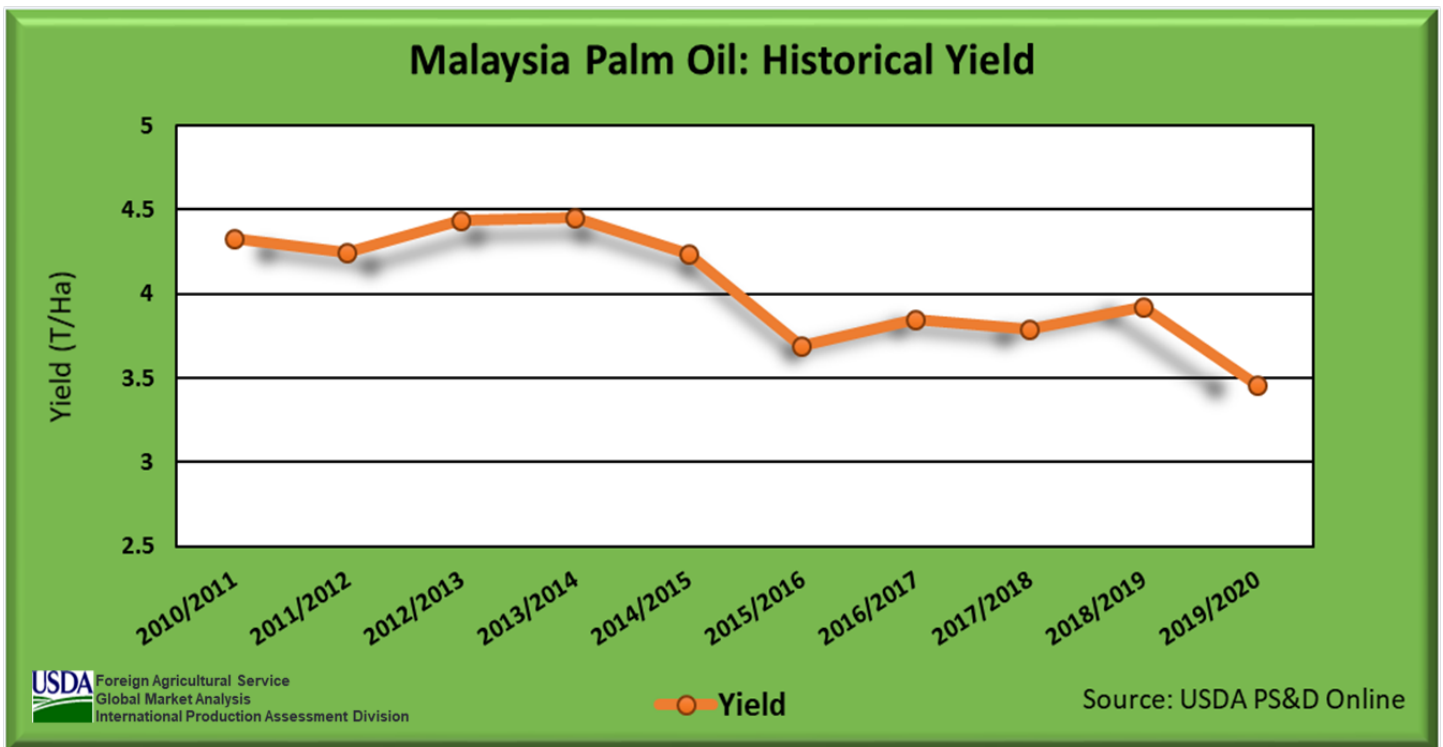


Figure 6: Reduced yields estimated for MY 2019/20

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Current area and production estimates for grains and other agricultural commodities are available on IPAD's Agricultural Production page:

[Crop Explorer https://ipad.fas.usda.gov/cropexplorer/](https://ipad.fas.usda.gov/cropexplorer/)or

Production, Supply and Distribution Database (PSD Online):

<http://apps.fas.usda.gov/psdonline/psdHome.aspx>

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