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**Report Name:** Explanation of Brazilian Cotton Stock Estimates

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## **Report Highlights:**

This report explains why official the USDA stocks and stocks-to-use estimates for Brazil's cotton production, supply, and distribution (PSD) are unusually high. The report demonstrates how the USDA August-July marketing year (MY), which is based on Northern Hemisphere, correlates with Brazil's planting, harvest, trade, and stocks timeline. The report also calculates un-official stocks on a calendar year basis, and explains how to extrapolate year-end stocks from the official PSD number.

Official USDA cotton estimates are based on an August-July marketing year (MY) that correlate with Northern Hemisphere countries but not Southern Hemisphere countries. For Brazil, this particular timeframe accounts for unusually high stock levels and stocks-to-use ratios in excess of 100 percent typically reported by USDA.

Table 1. USDA PSD for Brazil

USDA Official MY for Brazil (Aug-July)	2017/2018	2018/2019	2019/2020
Area Planted	0	0	0
Area Harvested	1175	1640	1700
Beginning Stocks	1509	1885	2668
Production	2001	2830	2830
Imports	18	4	5
MY Imports from U.S.	0	0	0
Total Supply	3534	4719	5504
Exports	909	1310	1916
Use	740	740	740
Loss	0	0	0
Total Dom. Cons.	740	740	740
Ending Stocks	1885	2668	2848
Total Distribution	107.15	107.15	110.15
Stock to Use %	114.3	130.13	107.22
Yield	1708	1726	1665
(1000 HA), (1,000 tons), (PERCENT), (KG/HA)			

Source: USDA PSD with data from March 2020

### **USDA's Official Marketing Year**

In order to understand USDA's stock number it is useful to first examine how Brazil's planting, harvest, and export cycle is spread out over USDA's marketing years. Figure 1 illustrates this cycle for the 2018/19 MY. Brazil's producers started sowing in December 2018 and continued through March 2019. Harvest kicked off in June, hastened in July and August, and tapered off in October 2019. All of the cotton harvested in June-October 2019 is captured in the 2018/19 MY production.

Due to the fact that ginning, consolidating, and transportation-to-ports all take time, the first exports from the 'new crop,' or the 2018/19 production, come online in mid-August 2019. Therefore, exports from the new crop fall into the 2019/20 MY. Conversely, at the time of planting and harvest of the 2018/19 crop, traders shipped 'old crop' cotton from the 2017/18 season. Figure 1 highlights the fact that export volumes follow directly behind harvested cotton coming on market.

PLANTING 2018/19

HARVEST 2018/19

150

OLD CROP EXPORTS

PLANTING 2018/19

NEW CROP EXPORTS

PROPRIED TO THE PR

Figure 1. Brazil's Planting, Production and Export Monthly Cycle

Source: Secex for Export Numbers for August 2018-April 2020. Post estimates for May-July 2020. Post chart.

Stocks typically reach their lowest level in May - June, as old crop supplies dwindle. USDA's estimates of Brazil's beginning and ending stocks are captured on July 31st, nearly at peak harvest, and include cotton that is still in the field. Moreover, stocks do not account for coming exports and domestic consumption in subsequent months since that activity occurs in the following MY.

### **Unofficial USDA Calendar Year Adjustment**

Adjusting the USDA estimates from marketing year (Aug-Jul) to calendar year (Jan-Dec) reveals tighter stocks that are more in line with the Brazilian Ministry of Agriculture's Food Supply Company's (CONAB) and National Cotton Exporter's Association (ANEA) stock estimates (Table 1). When observing USDA's April 2020 estimates, Brazil's 2019/20 cotton crop – adjusted to a calendar year (January-December 2020) basis – leads to a 42 percent stocks-to-use ratio for 2020. USDA's stocks-to-use ratio is lower than either CONAB or ANEA in the previous two calendar years as well.

Table 1. Comparison of Brazilian Cotton Ending Stocks (thousand metric tons)

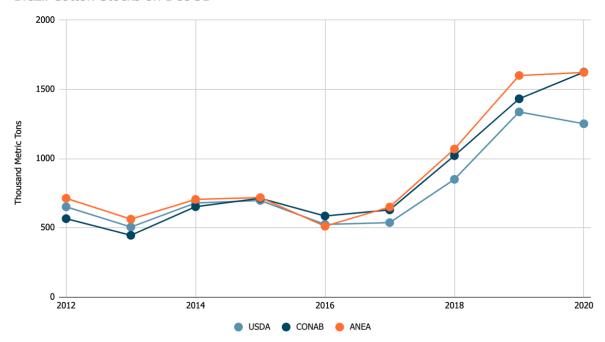
		2017/18	2018/19	2019/20
USDA Official Aug-July MY	Ending Stocks	1,885	2,668	2,856
	Stocks to Use	114%	130%	108%
USDA Unofficial CY (Jan-Dec)	Ending Stocks	850	1,337	1,251
	Stocks to Use	50%	57%	42%
CONAB (Jan-Dec MY)	Ending Stocks	1,021	1,432	1,624
	Stocks to Use	62%	60%	60%
ANEA (Jan-Dec MY)	Ending Stocks	1,069	1,600	1,622
	Stocks to Use	65%	69%	59%

Source: USDA PSD, Post Estimates for USDA Unofficial CY, CONAB and ANEA

Since 2012, USDA's adjusted calendar year stocks are consistent with CONAB and ANEA published figures, moreover, estimates released by all three agencies follow a similar trend (Figure 2).

Figure 2





Source: USDA PSD, CONAB, ANEA

# **Extrapolating CY Ending Stocks from Official USDA PSD**

It is possible to estimate calendar year stock volume from USDA estimates by projecting cotton net trade and domestic consumption from August to December. The table below outlines this calculation, which is that stocks on December 31 are equal to stocks on July 31 plus imports (Aug.-Dec.) less Exports and Consumption (Aug.-Dec.) Export and import figures are sourced from SECEX. Domestic consumption is not provided on a monthly basis, only the total from August through December. The end-of-year stocks in Table 1 therefore match with end-of-year stocks outlined in Table 3.

Table 3. Calculating USDA End Year Stocks (metric tons)

		July 31 (end of MY)	August	September	October	November	December	Total on December 31
2017/18	Imports		70	405	175	33	22	705
	Exports		68,012	132,733	168,382	156,335	138,661	664,123
	Consumption							372,000
	Stocks	1,885,000						849,582
2018/19	Imports		887	776	297	133	289	2,382
	Exports		24,234	87,882	177,124	211,768	227,913	728,921
	Consumption							604,000
	Stocks	2,668,000						1,337,461
2019/20	Imports		61	91	142	14	71	379
	Exports		45,293	164,630	288,155	256,499	277,967	1,032,544
	Consumption							565,000
	Stocks	2,848,000						1,250,835

Source: SECEX, USDA PSD, and USDA Calculation

### **Attachments:**

No Attachments.