



World Agricultural Supply and Demand Estimates

Report of October 12, 2023

Interagency Commodity Estimates Committee Forecasts

World Agricultural Outlook Board, Chairing Agency

Economic Research Service

Foreign Agricultural Service

Farm Production and Conservation

Agricultural Marketing Service

October 2023 Highlights

- The fall harvest is advancing. This month's *WASDE* incorporates the September 30 NASS *Small Grains* and *Grain Stocks* reports as well as today's *Crop Production* report.
- India soybean production lowered due to extreme dryness in August followed by near-record rains in September.
- Brazil cotton balance sheet: Shifting the marketing year.



World Wheat Production

Country or Region	2022/2023 estimate	2023/2024 forecast	Change from September 12	Change from 2022/2023
----- Million Tons -----				
World	789.5	783.4	-3.9	-6.1
United States	44.9	49.3	2.1	4.4
Foreign	744.6	734.1	-6.0	-10.5
Argentina	12.6	16.5	--	3.9
Canada	34.3	31.0	--	-3.3
Australia	39.7	24.5	-1.5	-15.2
European Union	134.2	134.0	--	-0.2
Turkey	17.2	19.5	--	2.2
Russia	92.0	85.0	--	-7.0
Ukraine	21.5	22.5	--	1.0
Kazakhstan	16.4	13.0	-2.0	-3.4
China	137.7	137.0	--	-0.7
India	104.0	113.5	--	9.5
Northwest Africa	7.6	7.7	--	**

-- No change.

World Wheat Supply and Use

Item	2022/2023 estimate	2023/2024 forecast	Change from September 12	Change from 2022/2023
----- Million Tons -----				
Beginning stocks	272.7	267.6	0.4	-5.1
Production	789.5	783.4	-3.9	-6.1
Total Supply	1,062.2	1,051.0	-3.5	-11.2
Feed use	155.7	156.4	-1.2	0.7
Total use	794.6	792.9	-3.0	-1.8
Trade	221.6	206.3	-1.1	-15.3
Ending Stocks	267.6	258.1	-0.5	-9.4

U.S. Wheat Supply and Demand

Item	2022/2023 estimate	2023/2024 forecast	Change from September 12	Change from 2022/2023
Planted area (million acres)	45.7	49.6	-0.2	3.8
Harvested area (million acres)	35.5	37.3	-0.6	1.8
Yield (bushels per acre)	46.5	48.6	2.8	2.1
<i>----- Million bushels -----</i>				
Beginning stocks	698	582	1	-117
Production	1,650	1,812	78	162
Imports	122	135	5	13
Total supply	2,470	2,529	84	59
Food use	973	974	--	1
Seed	68	65	--	-3
Feed and residual	89	120	30	31
Domestic use	1,130	1,159	30	29
Exports	759	700	--	-59
Total use	1,888	1,859	30	-29
Ending stocks	582	670	54	88
<i>----- Percent -----</i>				
Stocks to use ratio	30.8	36.0	2.4	5.2
<i>----- Dollars per bushel -----</i>				
Average market price	8.83	7.30	-0.20	-1.53

-- No change.

World Rice Production

Country or Region	2022/2023 estimate	2023/2024 forecast	Change from September 12	Change from 2022/2023
----- Million Tons -----				
World	513.7	518.1	0.1	4.5
United States	5.1	7.0	**	1.9
Foreign	508.6	511.1	0.1	2.5
Argentina	0.8	0.8	**	**
Brazil	7.0	6.8	--	-0.2
Egypt	3.6	3.8	--	0.2
Australia	0.37	0.52	--	0.15
Bangladesh	36.4	36.4	--	**
Burma	11.8	12.0	--	0.2
Cambodia	5.9	6.0	--	0.1
China	145.9	149.0	--	3.1
India	136.0	132.0	--	-4.0
Indonesia	34.0	34.5	--	0.4
Japan	7.5	7.3	-0.1	-0.2
Sri Lanka	2.8	3.1	--	0.3
Pakistan	5.5	9.0	--	3.5
Philippines	12.6	12.6	--	**
Thailand	20.9	19.5	--	-1.4
Vietnam	27.0	27.0	--	--

-- No change. ** Rounds to zero.

World Rice Supply and Use

Item	2022/2023 estimate	2023/2024 forecast	Change from September 12	Change from 2022/2023
----- Million Tons -----				
Beginning stocks	182.6	172.9	0.6	-9.8
Production	513.7	518.1	0.1	4.5
Total Supply	696.3	691.0	0.7	-5.3
Total use	523.5	523.5	0.8	0.1
Trade	54.7	52.3	0.2	-2.4
Ending Stocks	172.9	167.5	-0.1	-5.4



U.S. Rice Supply and Demand

Item	2022/2023 estimate	2023/2024 forecast	Change from September 12	Change from 2022/2023
Planted area (million acres)	2.22	2.90	--	0.68
Harvested area (million acres)	2.17	2.85	--	0.68
Yield (pounds per acre)	7,383	7,737	-14	354
<i>----- Million cwt -----</i>				
Beginning stocks	39.7	30.3	--	-9.5
Production	160.4	220.5	-0.4	60.1
Imports	39.9	39.0	--	-0.9
Total supply	240.0	289.8	-0.4	49.8
Domestic use	145.4	162.0	--	16.6
Exports	64.3	86.0	1.0	21.7
Total use	209.7	248.0	1.0	38.3
Ending stocks	30.3	41.8	-1.4	11.5
<i>----- Percent -----</i>				
Stocks to use ratio	14.4	16.8	-0.6	2.4
<i>----- Dollars per cwt -----</i>				
Average market price	19.30	16.80	--	-2.50

-- No change.

World Corn Production

Country or Region	2022/2023 estimate	2023/2024 forecast	Change from September 12	Change from 2022/2023
----- Million Tons -----				
World	1,155.0	1,214.5	0.2	59.5
United States	348.4	382.7	-1.8	34.3
Foreign	806.6	831.8	1.9	25.2
Argentina	34.0	55.0	1.0	21.0
Brazil	137.0	129.0	--	-8.0
Mexico	28.0	27.4	--	-0.6
Canada	14.5	15.3	--	0.8
European Union	52.2	59.7	0.3	7.5
Serbia	5.0	7.0	--	2.0
FSU-12	47.7	48.7	0.4	1.0
Ukraine	27.0	28.0	--	1.0
Russia	15.8	14.6	--	-1.2
South Africa	17.1	16.8	--	-0.3
China	277.2	277.0	--	-0.2
India	36.0	34.3	--	-1.7

-- No change.

World Corn Supply and Use

Item	2022/2023 estimate	2023/2024 forecast	Change from September 12	Change from 2022/2023
----- Million Tons -----				
Beginning stocks	310.5	298.1	-1.3	-12.4
Production	1,155.0	1,214.5	0.2	59.5
Total Supply	1,465.5	1,512.6	-1.2	47.1
Feed use	731.8	756.3	0.2	24.5
Total use	1,167.4	1,200.2	0.4	32.8
Trade	181.0	196.3	0.1	15.2
Ending Stocks	298.1	312.4	-1.6	14.3



U.S. Corn Supply and Demand

Item	2022/2023		2023/2024		
	Estimate	Change from September 12	Forecast	Change from September 12	Change from 2022/2023
Planted area (million acres)	88.6	**	94.9	--	6.3
Harvested area (million acres)	79.1	-0.1	87.1	--	8.0
Yield (bushels per acre)	173.4	**	173.0	-0.8	-0.4
----- Million bushels -----					
Beginning stocks	1,377	--	1,361	-90	-16
Production	13,715	-15	15,064	-69	1,350
Imports	39	-1	25	--	-14
Total supply	15,130	-16	16,451	-160	1,320
Feed and residual	5,549	124	5,600	-25	51
Food, seed, and industrial	6,559	-46	6,715	--	156
Ethanol	5,177	-18	5,300	--	123
Domestic use	12,108	78	12,315	-25	207
Exports	1,661	-4	2,025	-25	364
Total use	13,769	74	14,340	-50	571
Ending stocks	1,361	-90	2,111	-110	749
----- Percent -----					
Stocks to use ratio	9.9	-0.7	14.7	-0.7	4.8
----- Dollars per bushel -----					
Average market price	6.54	-0.01	4.95	0.05	-1.59

-- No change. ** Rounds to zero.

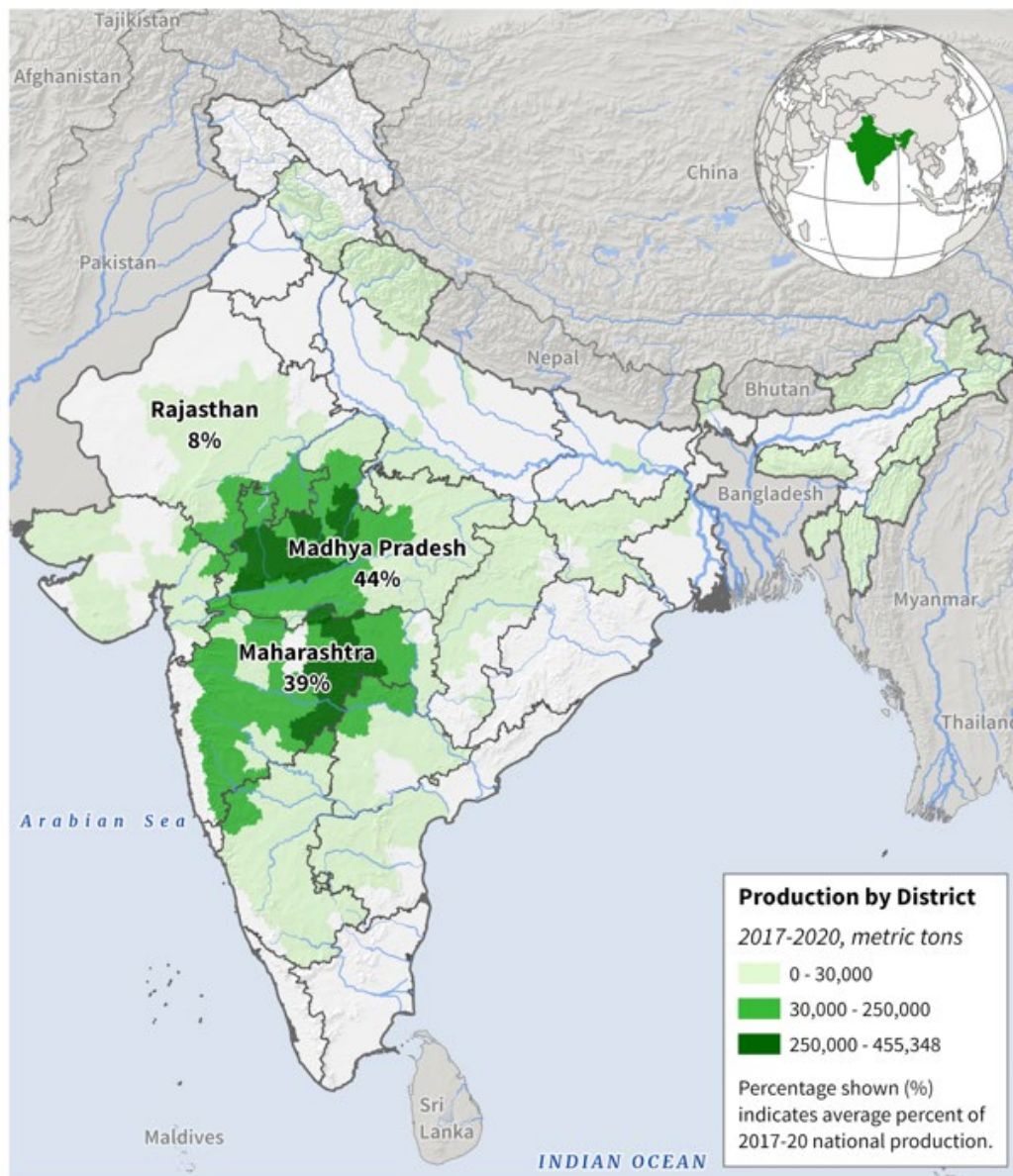
October 12, 2023

World Soybean Production

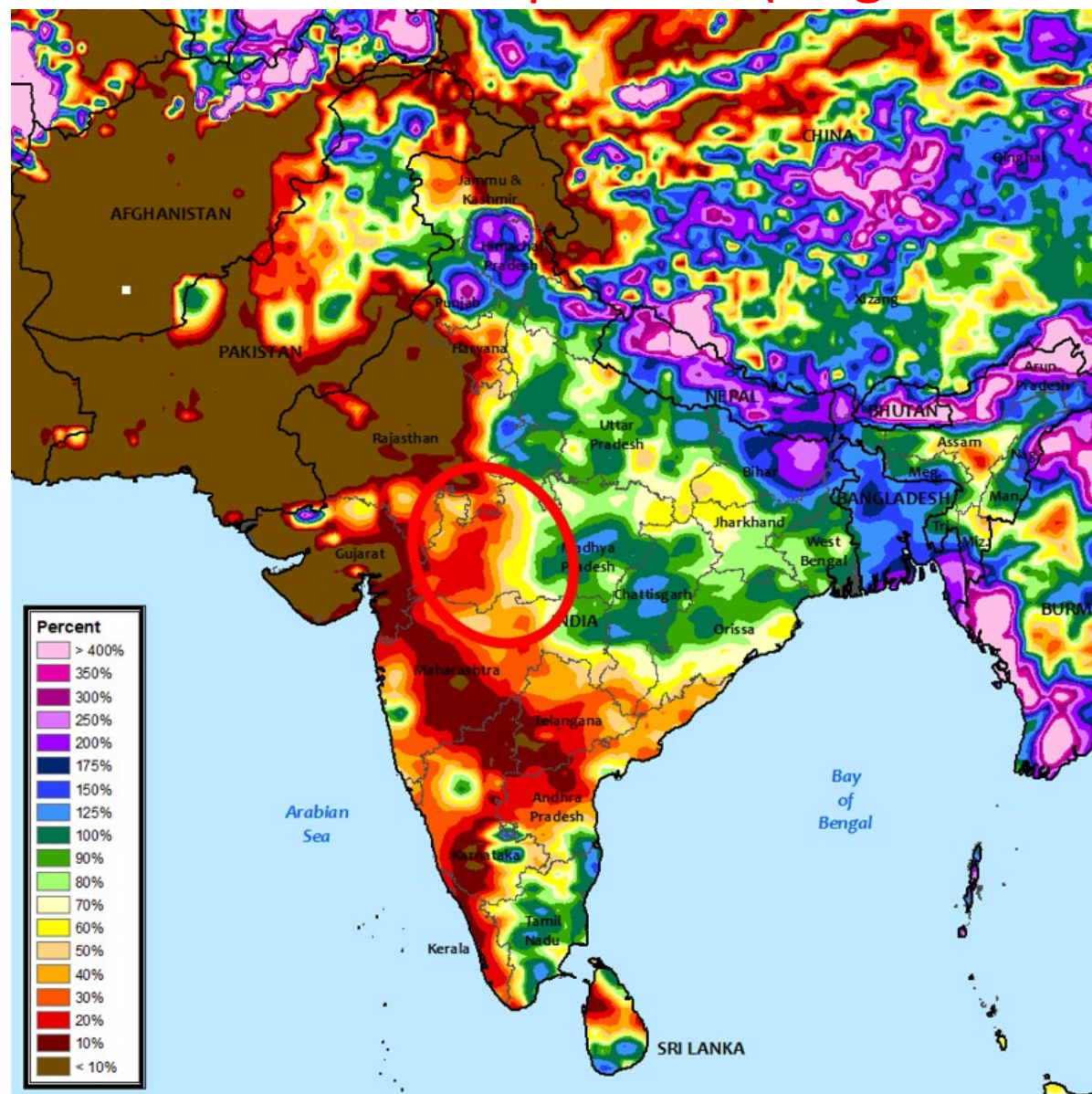
Country or Region	2022/2023 estimate	2023/2024 forecast	Change from September 12	Change from 2022/2023
----- Million Tons -----				
World	370.2	399.5	-1.8	29.3
United States	116.2	111.7	-1.1	-4.5
Foreign	254.0	287.8	-0.7	33.8
Argentina	25.0	48.0	--	23.0
Brazil	156.0	163.0	--	7.0
Paraguay	9.1	10.0	--	0.9
Canada	6.5	6.7	--	0.2
India	12.4	11.0	-1.0	-1.4
China	20.3	20.5	--	0.2

-- No change.

India Soybean Production

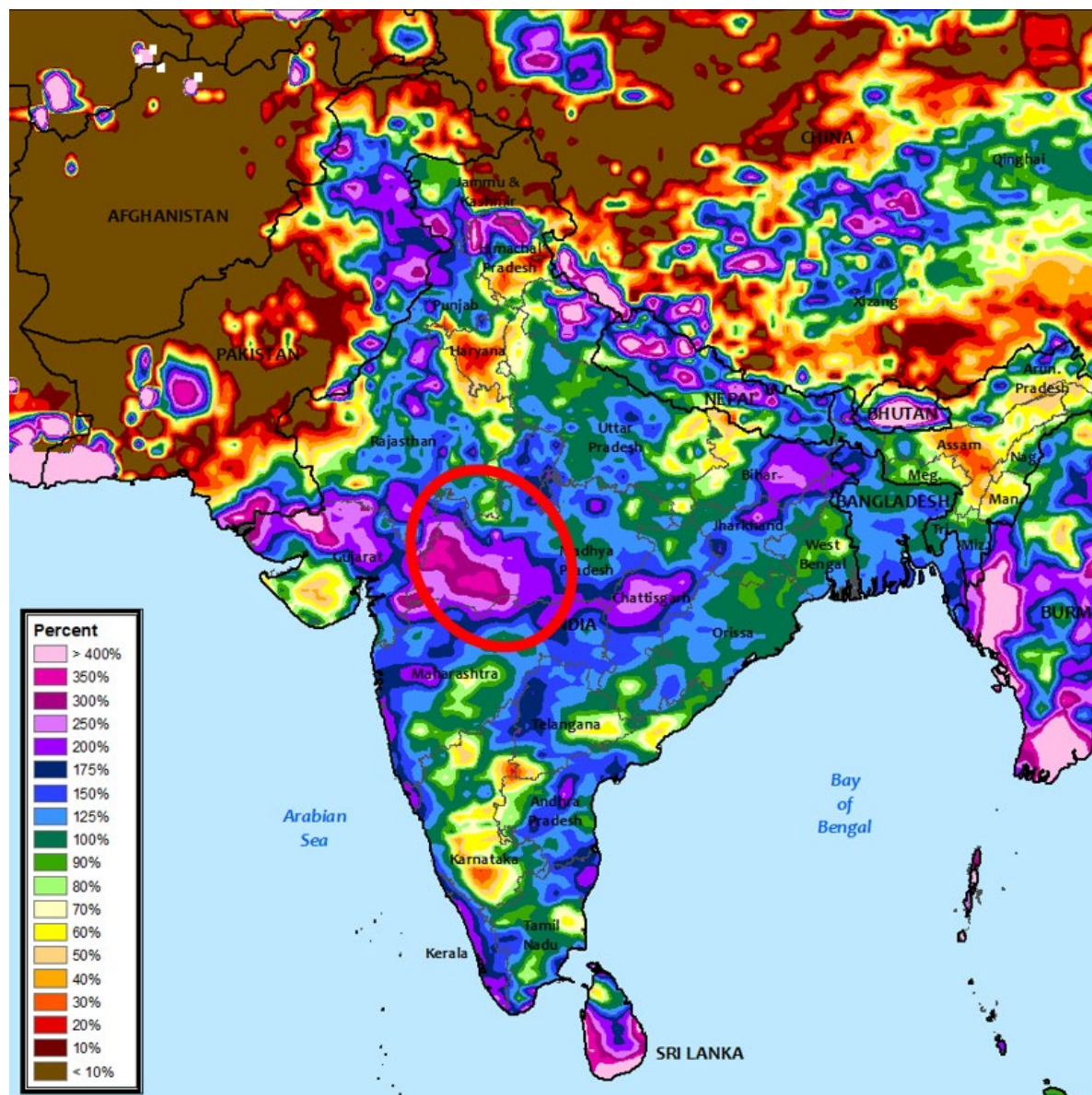


Percent of Normal Precipitation (August 1-31, 2023)

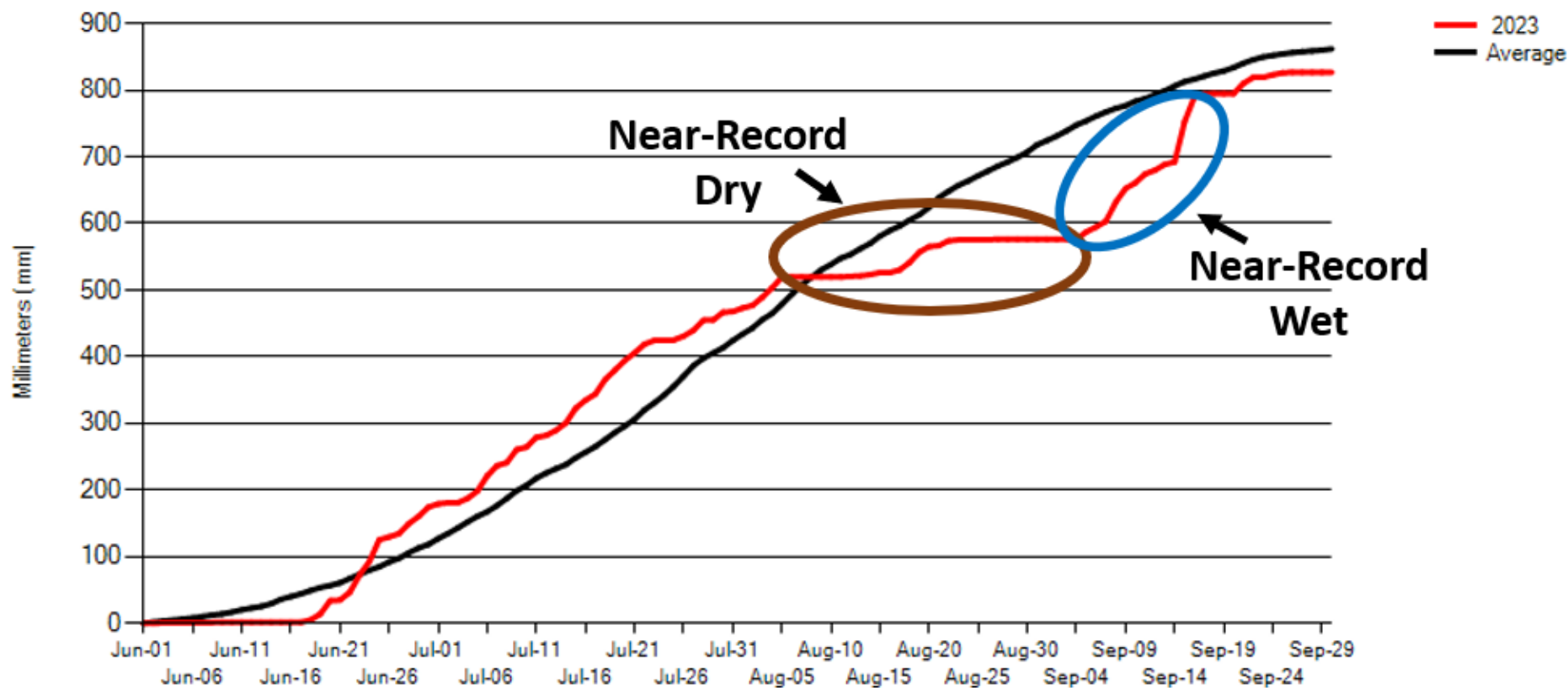


October 12, 2023

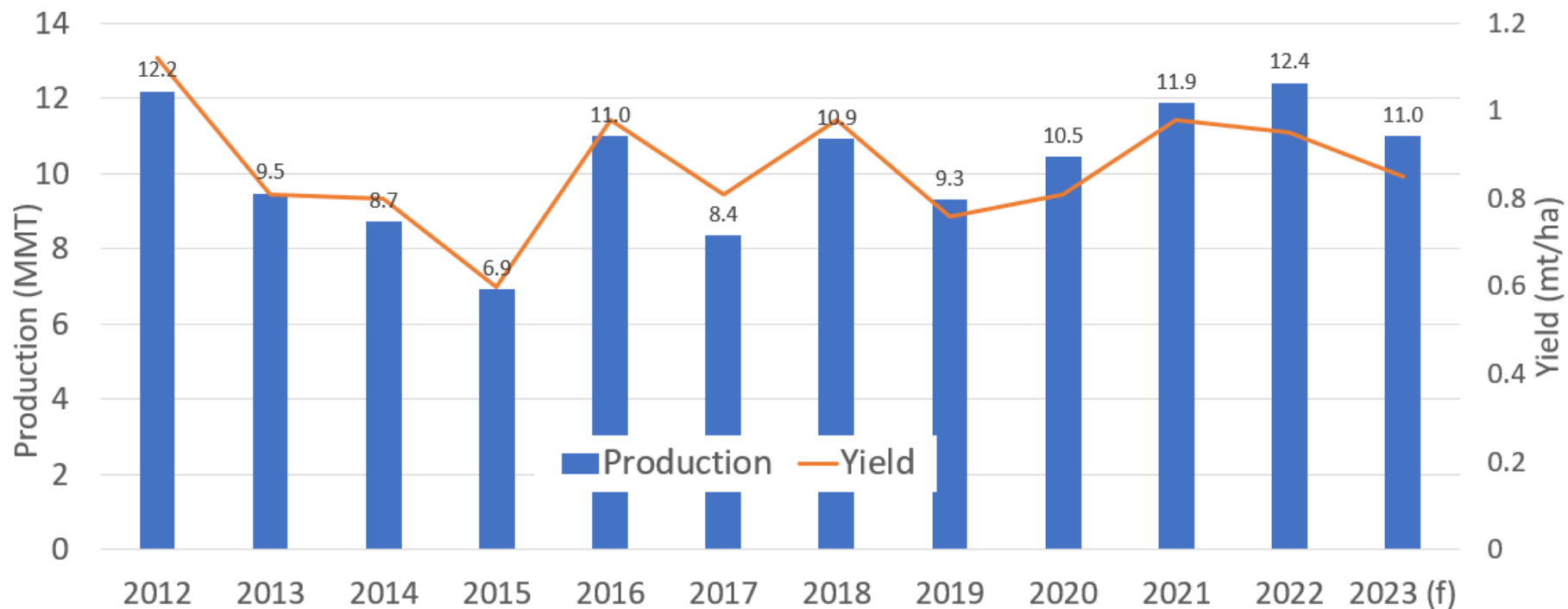
Percent of Normal Precipitation (September 1-30, 2023)



Cumulative Precipitation (Western Madya Pradesh)



2023 India Production Lowered 8 Percent



World Soybean Supply and Use

Item	2022/2023		2023/2024		
	Estimate	Change from September 12	Forecast	Change from September 12	Change from 2022/2023
----- Million Tons -----					
Beginning stocks	99.1	**	101.9	-1.1	2.8
Production	370.2	0.1	399.5	-1.8	29.3
Total Supply	469.4	0.2	501.4	-2.9	32.0
Crush	312.6	0.9	328.5	0.8	15.9
Total use	363.7	0.3	383.3	0.7	19.6
Trade	170.9	0.8	168.2	-0.2	-2.6
Ending Stocks	101.9	-1.1	115.6	-3.6	13.7
Addendum					
Beginning stocks					
Argentina plus Brazil	51.5	--	49.0	-0.6	-2.5
Imports*					
China	102.0	--	100.0	--	-2.0

*From all sources.

-- No change. ** Rounds to zero.



U.S. Soybeans Supply and Demand

Item	2022/2023		2023/2024		
	Estimate	Change from September 12	Forecast	Change from September 12	Change from 2022/2023
Planted area (million acres)	87.5	--	83.6	--	-3.9
Harvested area (million acres)	86.2	-0.2	82.8	--	-3.4
Yield (bushels per acre)	49.6	**	49.6	-0.5	0.0
----- Million bushels -----					
Beginning stocks	274	--	268	18	-6
Production	4,270	-6	4,104	-42	-166
Imports	25	-5	30	--	5
Total supply	4,569	-11	4,403	-24	-167
Crush	2,212	-8	2,300	10	88
Seed and Residual	97	-23	128	2	31
Domestic use	2,309	-31	2,428	12	119
Exports	1,992	2	1,755	-35	-237
Total use	4,301	-29	4,183	-23	-118
Ending stocks	268	18	220	**	-49
----- Percent -----					
Stocks to use ratio	6.2	0.5	5.2	**	-1.0
----- Dollars per bushel -----					
Average market price	14.20	--	12.90	--	-1.30

-- No change. ** Rounds to zero.

October 12, 2023

U.S. Soybean Oil Supply and Demand

Item	2022/2023		2023/2024		
	Estimate	Change from September	Forecast	Change from September 12	Change from 2022/2023
----- Million pounds -----					
Beginning stocks	1,991	--	1,761	-100	-230
Production	26,265	--	27,025	115	760
Imports	375	--	400	--	25
Total supply	28,631	--	29,186	15	555
Domestic disappearance	26,500	100	27,100	100	600
Biofuel	12,100	300	12,800	300	700
Food, feed, other	14,400	-200	14,300	-200	-100
Exports	370	--	350	--	-20
Total use	26,870	100	27,450	100	580
Ending stocks	1,761	-100	1,736	-85	-25
----- Cents per pound -----					
Average market price	65.26	-0.24	63.00	--	-2.26

-- No change.

World Cotton Production

Country or Region	2022/2023 estimate	2023/2024 forecast	Change from September 12	Change from 2022/2023
----- Million bales -----				
World	116.3	112.6	0.2	-3.7
United States	14.5	12.8	-0.3	-1.7
Foreign	101.8	99.8	0.5	-2.0
Argentina	1.5	1.3	0.1	-0.2
Brazil	11.7	14.6	0.8	2.8
Turkey	4.9	3.5	--	-1.4
Australia	5.8	5.1	-0.3	-0.7
China	30.7	27.0	--	-3.7
India	26.0	25.0	--	-1.0
Pakistan	3.9	6.5	--	2.6
Uzbekistan	3.3	2.9	--	-0.4
Turkmenistan	0.9	0.9	--	--
African Franc Zone	4.0	4.9	--	0.9

-- No change.

World Cotton Supply and Demand

Item	2022/2023 estimate	2023/2024 forecast	Change from September 12	Change from 2022/2023
----- Million bales -----				
Beginning stocks	76.5	82.8	-10.3	6.3
Production	116.3	112.6	0.2	-3.7
Total Supply	192.8	195.4	-10.1	2.6
Consumption	110.9	115.8	-0.1	4.9
Trade	37.0	43.2	**	6.2
Ending Stocks	82.8	79.9	-10.0	-2.9
Addendum				
China ending stocks	37.4	36.8	--	-0.6

-- No change. ** Rounds to zero.

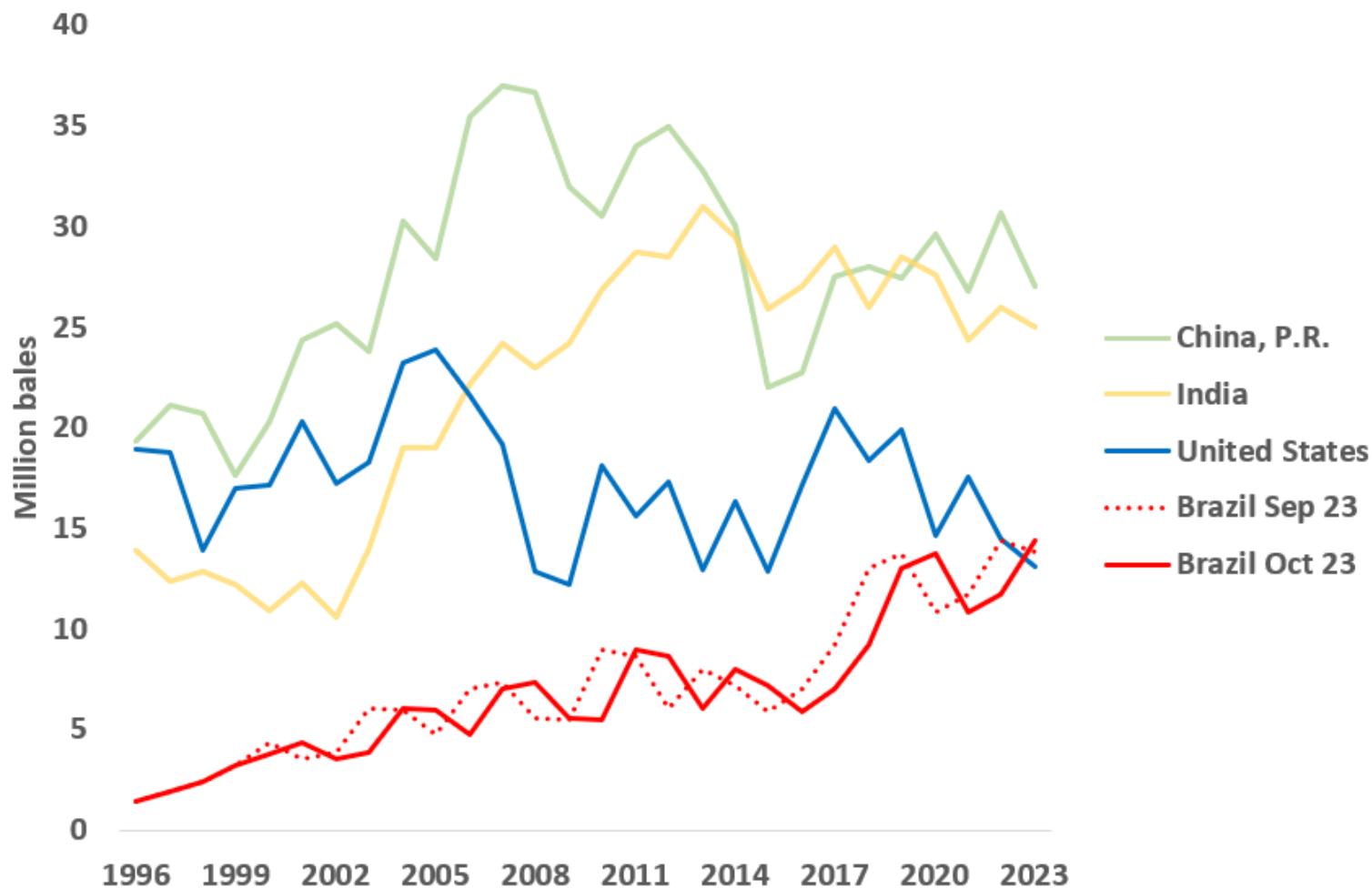
U.S. Cotton Supply and Demand

Item	2022/2023 estimate	2023/2024 forecast	Change from September 12	Change from 2022/2023
Planted area (million acres)	13.76	10.23	--	-3.53
Harvested area (million acres)	7.31	8.02	--	0.71
Yield (pounds per acre)	950	767	-19	-183
<i>----- Million bales -----</i>				
Beginning stocks	4.05	4.25	--	0.20
Production	14.47	12.82	-0.32	-1.65
Imports	0.00	0.01	--	**
Total supply	18.52	17.07	-0.31	-1.45
Mill use	2.05	2.15	--	0.10
Exports	12.77	12.20	-0.10	-0.57
Total use	14.82	14.35	-0.10	-0.47
Unaccounted	-0.55	-0.08	-0.02	0.47
Ending stocks	4.25	2.80	-0.20	-1.45
<i>----- Percent -----</i>				
Stocks to use ratio	28.7	19.5	-1.2	-9.2
<i>----- Cents per pound -----</i>				
Average market price	84.80	80.00	--	-4.80

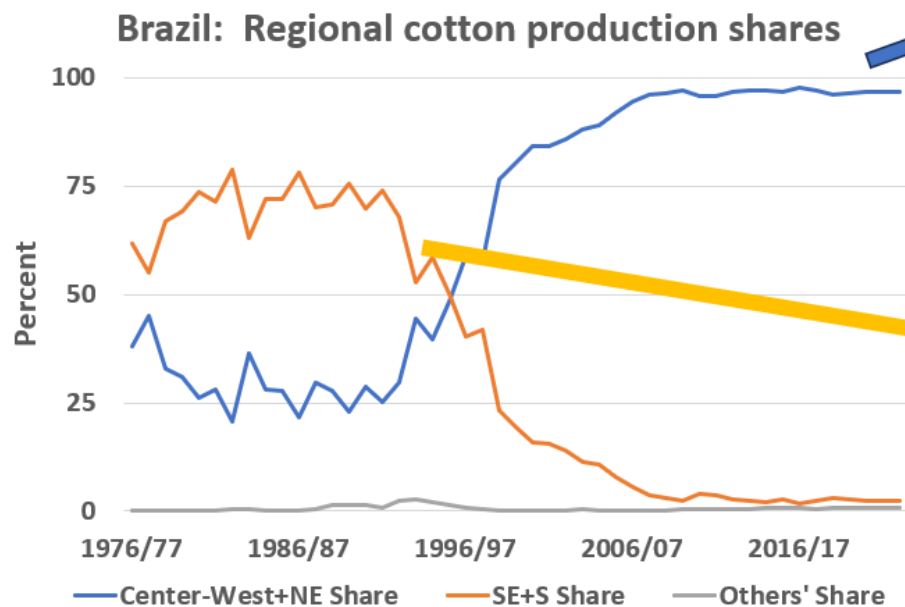
-- No change. **Rounds to zero.

October 12, 2023

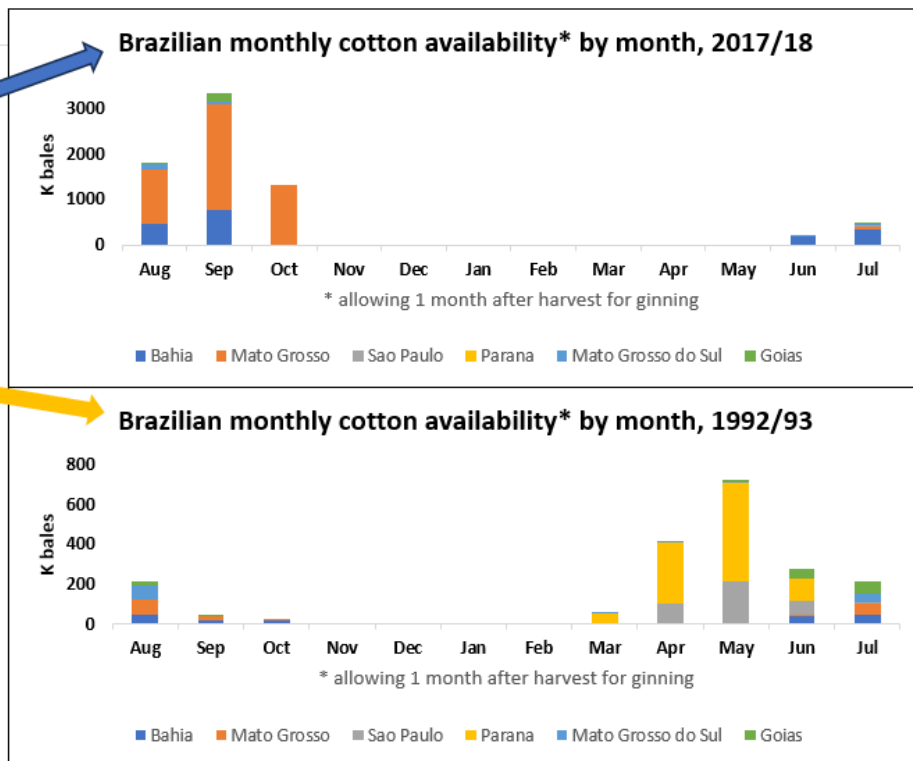
Top Four World Cotton Producers



Change in Regional Production Changes Timing of Harvest

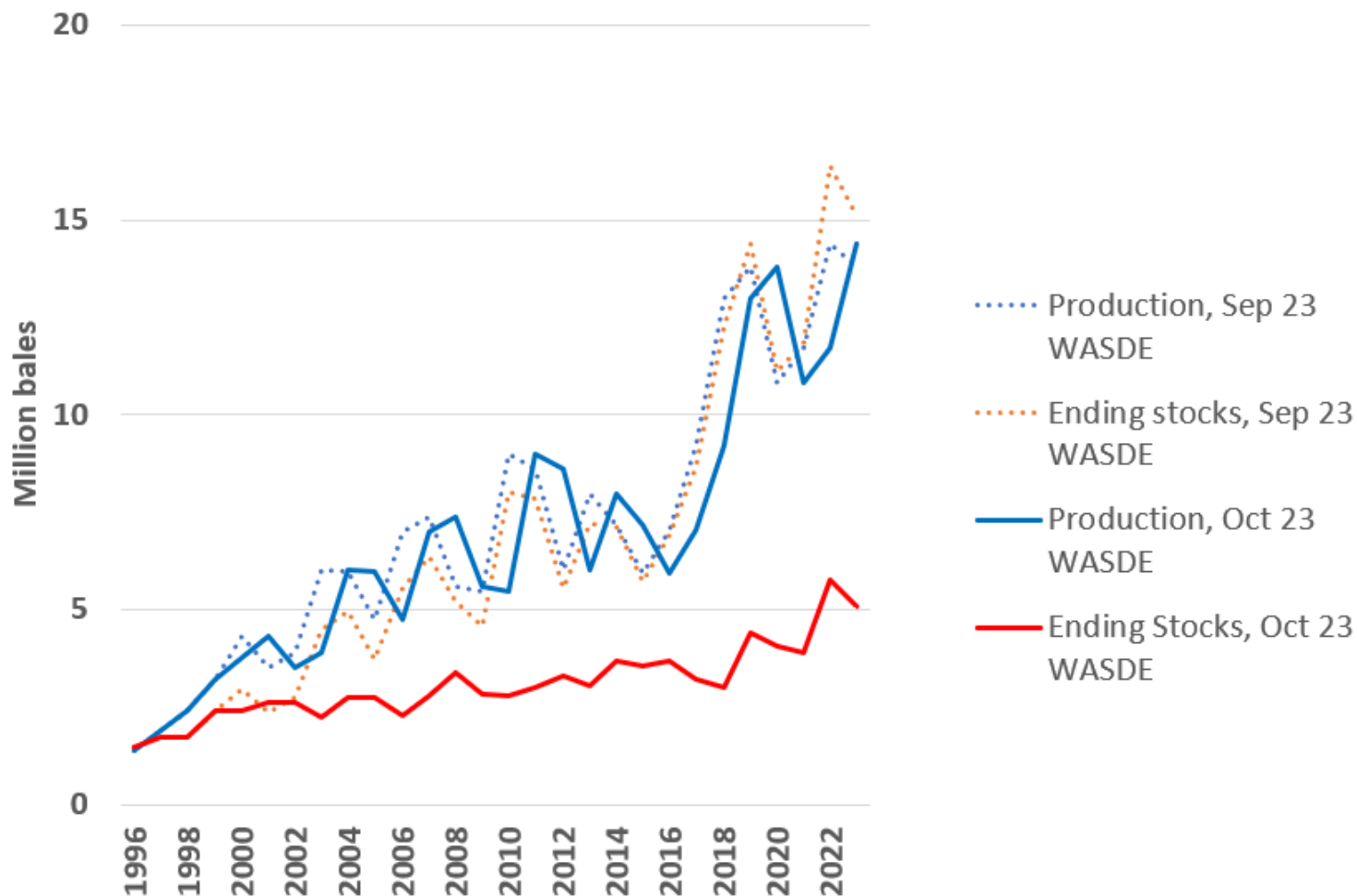


Source: CONAB
<https://www.conab.gov.br/info-agro/safras/serie-historica-das-safras#gr%C3%A3os-2>

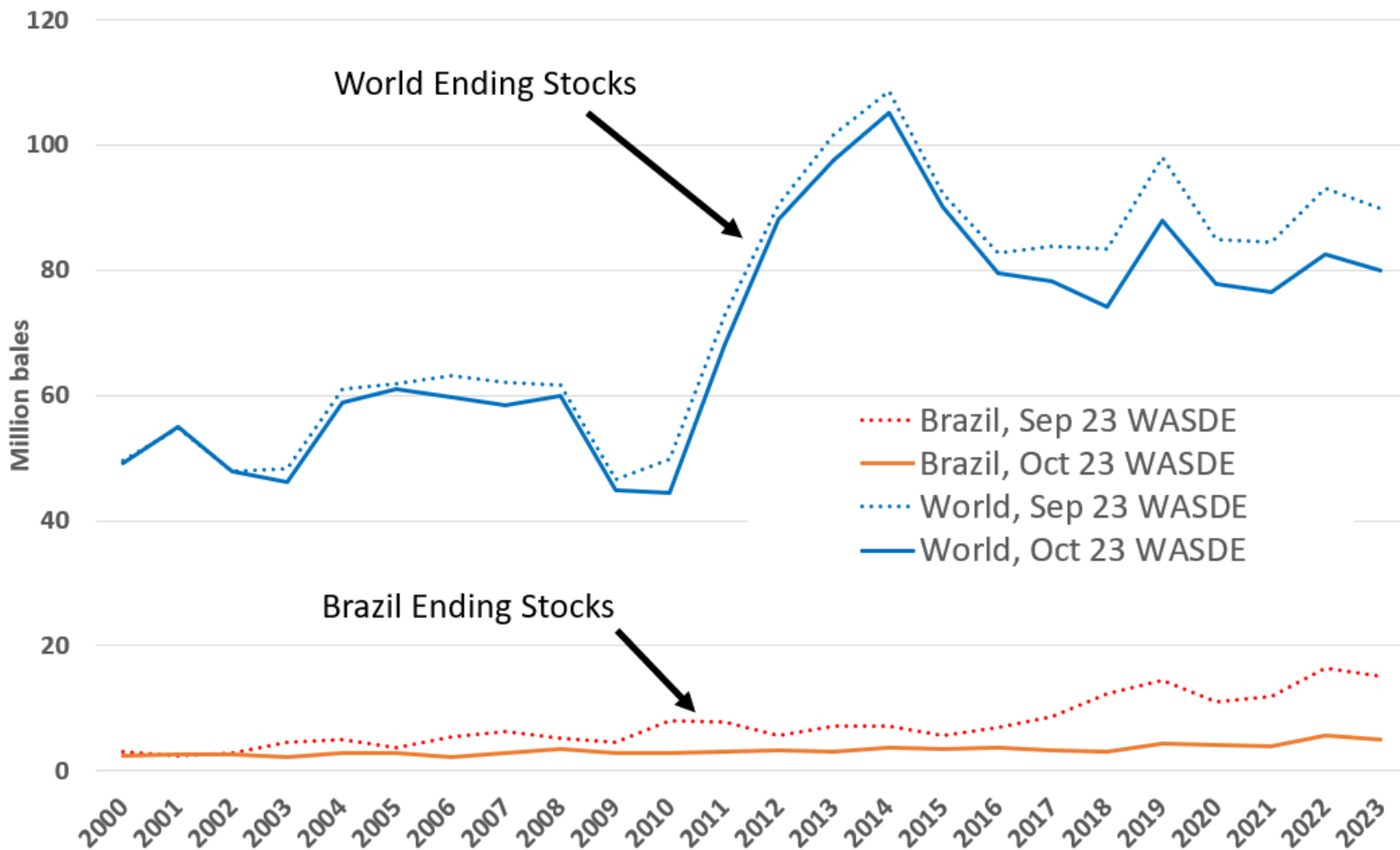


(WAOB/USDA estimates based on CONAB monthly harvest data for 2002, 2003, and 2009-16 and CONAB annual data by state 1992-2017)

Brazil Cotton Production and Ending Stocks



Lower Brazilian Ending Stocks Result in Sharply Lower World Ending Stocks





U.S. Sugar Supply and Demand

Item	2022/2023		2023/2024		
	Estimate	Change from September 12	Forecast	Change from September 12	Change from 2022/2023
----- Thousand short tons, raw value -----					
Beginning Stocks	1,820	--	1,977	-183	156
Production	9,237	-25	8,969	-12	-268
Beets	5,168	--	5,151	-71	-16
Cane	4,069	-25	3,817	59	-252
Imports	3,584	-154	3,277	13	-307
TRQ	1,834	-35	1,617	13	-216
Re-export	141	-59	200	--	59
Mexico	1,156	-63	1,284	--	128
High-tier	453	3	175	--	-278
Total Supply	14,641	-179	14,222	-182	-419
Exports	70	25	35	--	-35
Domestic deliveries	12,594	-21	12,630	-25	36
Total use	12,664	4	12,665	-25	1
Ending stocks	1,977	-183	1,557	-157	-420
----- Percent -----					
Stocks/use ratio	15.6	-1.4	12.3	-1.2	-3.3

-- No change.

October 12, 2023

Mexico Sugar Supply and Demand

Item	2022/2023		2023/2024		
	Estimate	Change from September 12	Forecast	Change from September 12	Change from 2022/2023
----- Thousand metric tons -----					
Beginning Stocks	964	--	836	-44	-129
Production	5,224	--	5,575	-225	351
Imports	285	31	322	277	37
Total Supply	6,474	31	6,733	8	259
Domestic Use	4,627	130	4,699	110	72
Exports	1,011	-54	1,124	-124	113
Total use	5,638	75	5,823	-13	185
Ending stocks	836	-44	909	21	74

-- No change.

U.S. Meat Production and Prices

Item	2023		2024		
	Forecast	Change from September 12	Forecast	Change from September 12	Change from 2023
Production ----- <i>Billion Pounds</i> -----					
Beef	26.98	0.04	25.28	0.11	-1.70
Pork	27.29	0.13	27.90	0.56	0.61
Broilers	46.49	-0.20	47.11	-0.20	0.62
Turkey	5.55	-0.03	5.64	-0.01	0.09
Total Meat	107.06	-0.07	106.66	0.46	-0.40
Prices ----- <i>Dollars per cwt</i> -----					
Steers	177.30	-1.18	185.00	-0.50	7.70
Hogs	59.70	-0.18	61.25	-3.50	1.55
----- <i>Cents per pound</i> -----					
Broilers	124.0	0.8	122.3	1.0	-1.8
Turkey	144.9	-4.6	137.8	-8.8	-7.1



U.S. Meat Trade

Million Pounds

Item	2023		2024		
	Forecast	Change from September 12	Forecast	Change from September 12	Change from 2023
----- Exports -----					
Beef	3,034	-20	2,845	-55	-189
Pork	6,761	-40	6,950	50	189
Broilers	7,303	50	7,380	-50	78
Turkey	455	15	480	20	25
Mature chickens	25	5	24	8	-1
Total Meat	17,582	10	17,685	-27	103
----- Imports -----					
Beef	3,617	70	3,650	60	33

U.S. Milk Supply and Demand

Item	2023		2024		
	Forecast	Change from September 12	Forecast	Change from September 12	Change from 2023
----- <i>Billion pounds</i> -----					
Production	227.6	0.1	230.4	--	2.8
Fat Basis					
Imports	7.4	**	7.5	0.1	0.1
Domestic Use	222.9	0.4	224.8	0.1	1.9
Exports	11.0	-0.1	12.0	-0.1	1.0
Skim-solid Basis					
Imports	6.6	0.1	6.7	-0.1	0.2
Domestic Use	183.4	0.8	183.1	-0.1	-0.3
Exports	49.5	-0.5	52.9	-0.1	3.4

-- No change. ** Rounds to zero.



U.S. Dairy Product Prices

Item	2023		2024		
	Forecast	Change from September 12	Forecast	Change from September 12	Change from 2023
Product prices ----- <i>Dollars per pound</i> -----					
Cheese	1.77	-0.04	1.80	-0.04	0.03
Butter	2.66	0.12	2.66	0.11	-0.01
Nonfat dry milk	1.18	0.02	1.13	0.04	-0.05
Dry whey	0.35	**	0.32	--	-0.03
Class prices ----- <i>Dollars per cwt</i> -----					
Class III	17.05	-0.30	17.20	-0.35	0.15
Class IV	19.25	0.65	18.80	0.80	-0.45
All milk	20.70	0.30	20.55	0.25	-0.15

-- No change. ** Rounds to zero.



U.S. Production Summary

Item	2022/2023		2023/2024		
	Estimate	Change from September 12	Forecast	Change from September 12	Change from 2022/2023
<i>Crops and Products</i>					
Wheat (million bushels)	1,650	**	1,812	78	162
Rice (million cwt)	160.4	--	220.5	-0.4	60.1
Corn (million bushels)	13,715	-15	15,064	-69	1,350
Sorghum (million bushels)	188	--	360	-22	172
Barley (million bushels)	175	1	185	5	10
Oats (million bushels)	58	--	57	8	-1
Soybeans (million bushels)	4,270	-6	4,104	-42	-166
Soybean oil (million pounds)	26,265	--	27,025	115	760
Soybean meal (thousand s.t.)	52,564	--	54,175	200	1,611
Cotton (million bales)	14.47	--	12.82	-0.32	-1.65
Sugar (thousand s.t., raw value)	9,237	-25	8,969	-12	-268
<i>Milk (billion pounds)</i>	227.6	0.1	230.4	--	2.8
<i>Meat (billion pounds)</i>					
Beef	26.98	0.04	25.28	0.11	-1.70
Pork	27.29	0.13	27.90	0.56	0.61
Broilers	46.49	-0.20	47.11	-0.20	0.62
Turkey	5.55	-0.03	5.64	-0.01	0.09
Total Meat	107.06	-0.07	106.66	0.46	-0.40

-- No change. ** Rounds to zero.

October 12, 2023



U.S. Domestic Consumption Summary

Item	2022/2023		2023/2024		
	Estimate	Change from September 12	Forecast	Change from September 12	Change from 2022/2023
<i>Crops and Products</i>					
Wheat (million bushels)	1,130	-2	1,159	30	29
Rice (million cwt)	145.4	--	162.0	--	16.6
Corn (million bushels)	12,108	78	12,315	-25	207
Sorghum (million bushels)	102	2	110	-10	8
Barley (million bushels)	181	-1	185	10	4
Oats (million bushels)	138	**	136	5	-2
Soybeans (million bushels)	2,309	-31	2,428	12	119
Soybean oil (million pounds)	26,500	100	27,100	100	600
Soybean meal (thousand s.t.)	38,600	-150	39,425	--	825
Cotton (million bales)	2.05	--	2.15	--	0.10
Sugar (thousand s.t., raw value)	12,594	-21	12,630	-25	36
<i>Milk (billion pounds, fat basis)</i>	222.9	0.4	224.8	0.1	1.9
<i>Meat (Billion pounds)</i>					
Beef	27.75	0.15	26.15	0.23	-1.60
Pork	21.69	0.19	22.15	0.53	0.46
Broilers	38.83	-0.23	39.34	-0.14	0.51
Turkey	5.14	-0.05	5.23	-0.04	0.10
Total Meat	94.44	0.03	93.96	0.56	-0.48

-- No change. ** Rounds to zero.

October 12, 2023



U.S. Export Summary

Item	2022/2023		2023/2024		
	Estimate	Change from September 12	Forecast	Change from September 12	Change from 2022/2023
<i>Crops and Products</i>					
Wheat (million bushels)	759	--	700	--	-59
Rice (million cwt)	64.3	--	86.0	1.0	21.7
Corn (million bushels)	1,661	-4	2,025	-25	364
Sorghum (million bushels)	109	-1	245	-10	136
Soybeans (million bushels)	1,992	2	1,755	-35	-237
Soybean oil (million pounds)	370	--	350	--	-20
Soybean meal (thousand s.t.)	14,550	150	15,300	200	750
Cotton (million bales)	12.77	--	12.20	-0.10	-0.57
<i>Meat (Million lbs)</i>					
Beef	3,034	-20	2,845	-55	-189
Pork	6,761	-40	6,950	50	189
Broilers	7,303	50	7,380	-50	78
Turkey	455	15	480	20	25
Mature Chickens	25	5	24	8	-1
Total Meat	17,582	10	17,685	-27	103

-- No change.

October 12, 2023



Price Summary

Item	2022/2023		2023/2024		
	Estimate	Change from September 12	Forecast	Change from September 12	Change from 2022/2023
<i>Crops and products</i>					
Wheat (\$/bu)	8.83	--	7.30	-0.20	-1.53
Rice (\$/cwt)	19.30	--	16.80	--	-2.50
Corn (\$/bu)	6.54	-0.01	4.95	0.05	-1.59
Soybeans (\$/bu)	14.20	--	12.90	--	-1.30
Soybean oil (¢/lb)	65.26	-0.24	63.00	--	-2.26
Soybean meal (\$/s.t.)	452	-3	380	--	-72
Cotton (¢/lb)	84.80	2.80	80.00	--	-4.80
<i>Livestock</i>					
Steers (\$/cwt)	177.30	-1.18	185.00	-0.50	7.70
Hogs (\$/cwt)	59.70	-0.18	61.25	-3.50	1.55
Broilers (¢/lb)	124.0	0.8	122.3	1.0	-1.8
Turkeys (¢/lb)	144.9	-4.6	137.8	-8.8	-7.1
<i>Dairy products</i>					
Cheese (\$/lb)	1.77	-0.04	1.80	-0.04	0.03
Butter (\$/lb)	2.66	0.12	2.66	0.11	-0.01
Nonfat dry milk (\$/lb)	1.18	0.02	1.13	0.04	-0.05
Dry whey (\$/lb)	0.35	**	0.32	--	-0.03
<i>Milk classes</i>					
Class III (\$/cwt)	17.05	-0.30	17.20	-0.35	0.15
Class IV (\$/cwt)	19.25	0.65	18.80	0.80	-0.45
All milk (\$/cwt)	20.70	0.30	20.55	0.25	-0.15

-- No change. ** Rounds to zero.



Revising how USDA matches Brazilian Government marketing year cotton production data to USDA August-July WASDE estimates: MY2000-MY2023

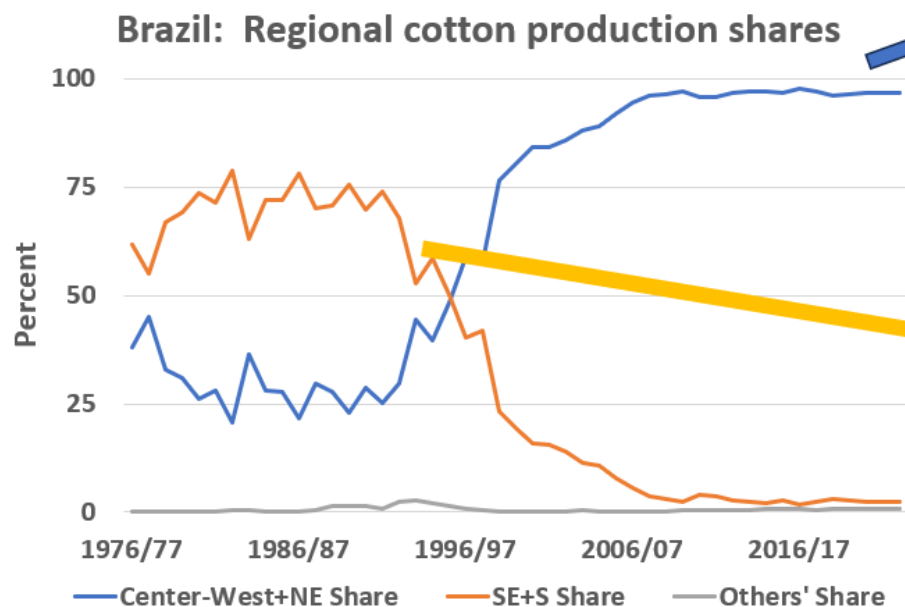
Stephen MacDonald, WAOB/USDA

October 12, 2023

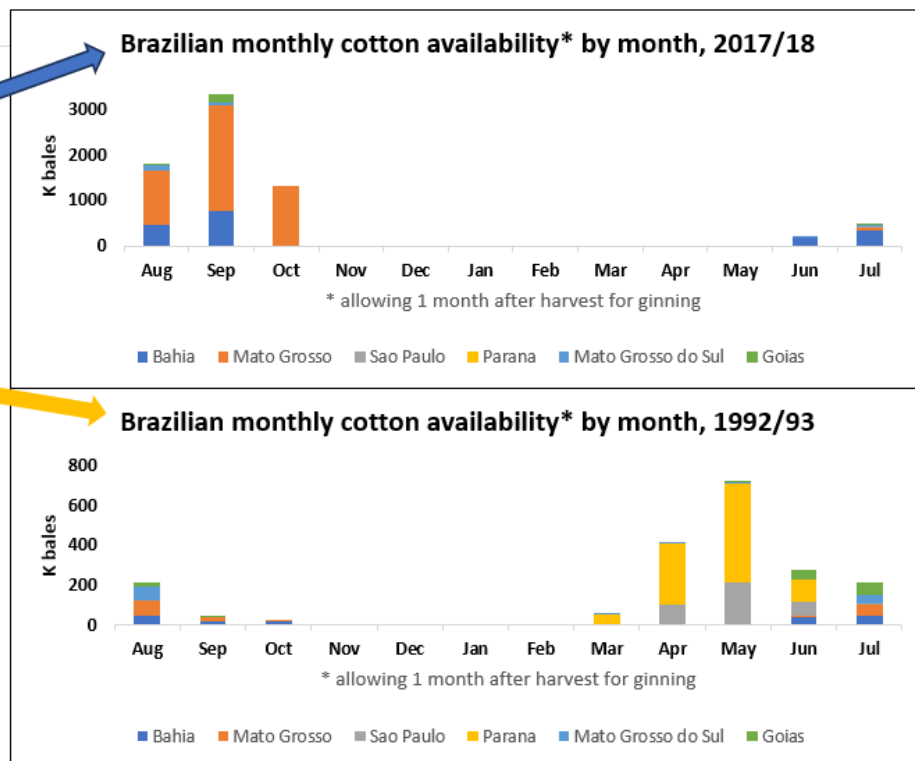
Starting October 2023 USDA changes its approach to matching Brazilian Government production data with USDA's August-July marketing year

- Regional shifts in Brazil's cotton industry have altered the seasonal timing of Brazilian production
 - Since MY2000, the cotton harvest has been months later than previously, and often largely after the end of the August-July marketing year
- USDA's traditional approach to mapping Brazilian government marketing year production data to USDA's August-July marketing is no longer appropriate. The approach has resulted in:
 - Inconsistencies in USDA's Brazilian cotton balance sheet
 - Brazil ending stock estimates as much as 300 percent too high
 - World ending stock estimates as much as 13 percent too high

Brazil cotton shifts: change in regional production changes timing of harvest



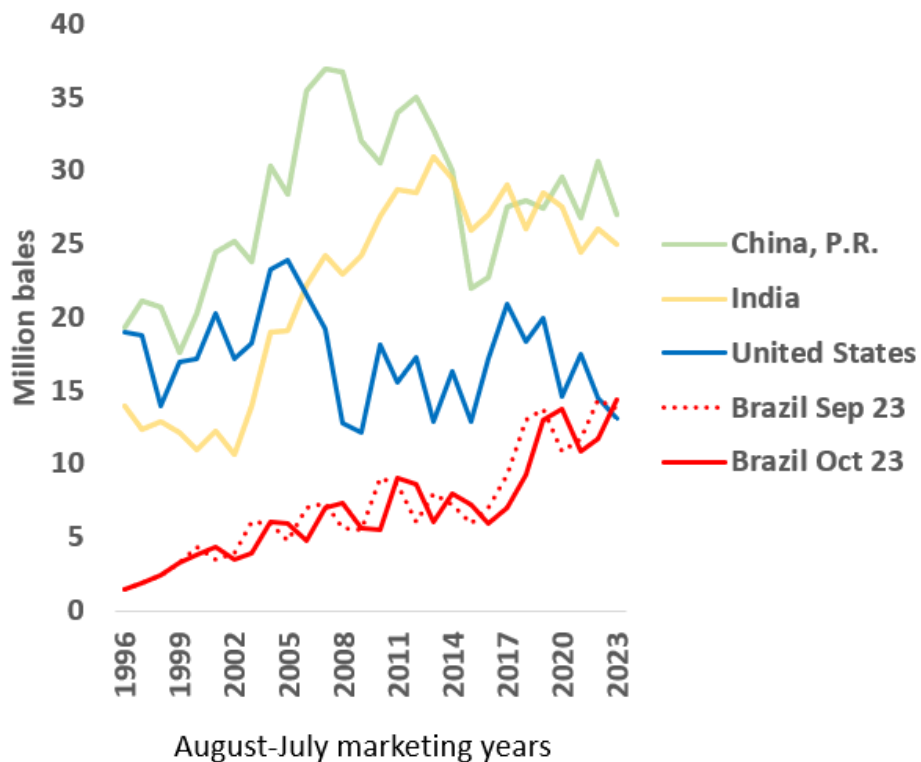
Source: CONAB
<https://www.conab.gov.br/info-agro/safras/serie-historica-das-safras#gr%C3%A3os-2>



(WAOB/USDA estimates based on CONAB monthly harvest data for 2002, 2003, and 2009-16 and CONAB annual data by state 1992-2017)

Global shift for Brazilian cotton production: from 10th largest to Third largest in world

Top 4 World Cotton Producers



- Brazil's cotton production has trended strongly upwards since the mid-1990s
 - World's second largest exporter since MY2017
- Brazil's larger shares of world cotton production, trade, and stocks increases the importance of an effectively constructed balance sheet

Change to Brazil cotton in WASDE: shift estimated area and production from 2000-22 to 2001-23

MY	Sep 23 Production Th. bales	Oct 23 Production Th. bales	Sep 23 Area Th. hectares	Oct 23 Area Th. hectares	Sep 23 Yield kg/ha	Oct 23 Yield kg/ha
1999	3216	3216	752	752	931	931
2000	4312	3764	853	803	1101	1021
2001	3519	4312	748	853	1024	1101
2002	3890	3519	735	748	1152	1024
2003	6015	3890	1100	735	1191	1152
2004	5960	6015	1180	1100	1100	1191
2005	4760	5960	855	1180	1212	1100
2006	7000	4760	1095	855	1392	1212
2007	7360	7000	1075	1095	1491	1392
2008	5580	7360	845	1075	1438	1491
2009	5480	5580	835	845	1429	1438
2010	9000	5480	1400	835	1400	1429
2011	8620	9000	1395	1400	1345	1400
2012	6020	8620	895	1395	1464	1345
2013	7960	6020	1120	895	1547	1464
2014	7180	7960	975	1120	1603	1547
2015	5920	7180	955	975	1350	1603
2016	7020	5920	940	955	1626	1350
2017	9220	7020	1175	940	1708	1626
2018	13000	9220	1640	1175	1726	1708
2019	13780	13000	1665	1640	1802	1726
2020	10820	13780	1370	1665	1720	1802
2021	11720	10820	1600	1370	1595	1720
2022	14400	11720	1660	1600	1889	1595
2023	13800	14560	1670	1660	1799	1910

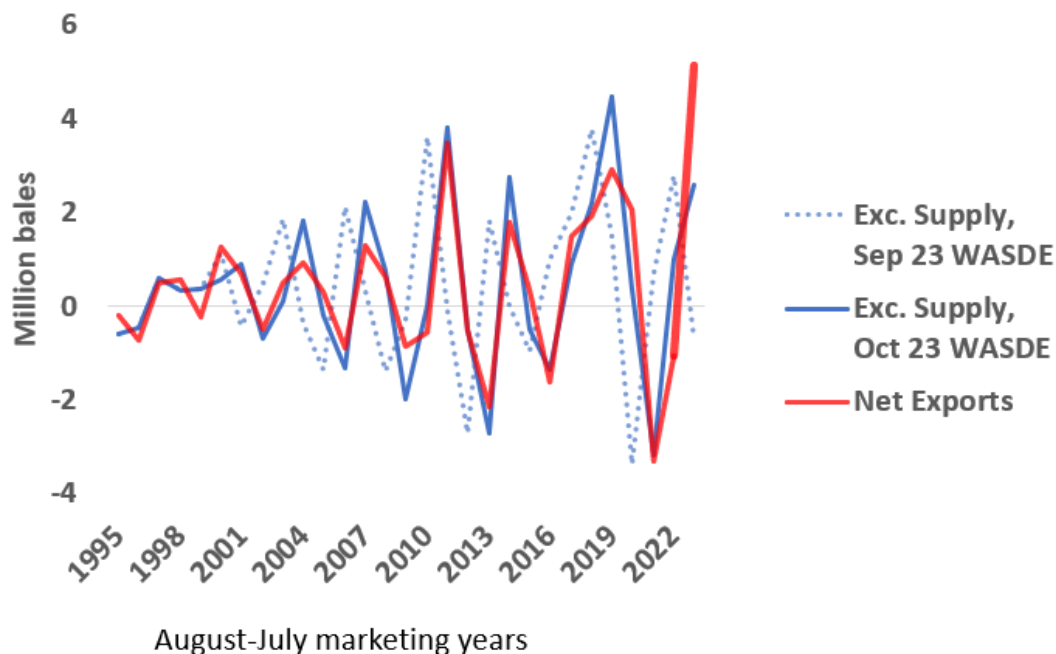
August-July marketing years

- CONAB* data remains WASDE Brazil production benchmark
- WASDE's September 2023 MY2000-MY2022 area and production estimates shift to one year later
 - Become MY2001-MY2023 estimates in October 2023 WASDE
 - Also, WASDE's MY2023 production and yield updated to correspond to October 10, 2023 update to CONAB's MY2022 crop
- New MY2000 estimates for area and production are the average of the September 2023 MY1999 and MY2000 estimates
 - Yield is residually estimated

*(Companhia Nacional de Abastecimento—a public company under Brazil's Ministry of Livestock and Food Supply)

Past inconsistency in Brazil balance sheet: October 2023 production data shift corrects a timing mismatch between supply and use

Brazil Cotton Net Exports and Sep 23 & Oct 23 Excess Supply* (year-to-year change)

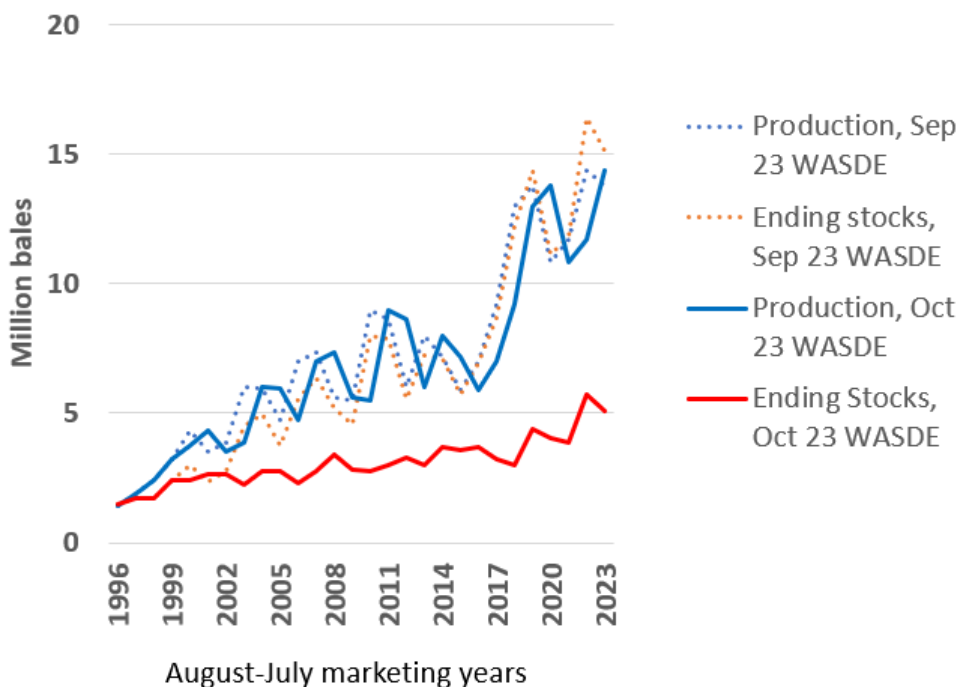


*Excess Supply = Production - Consumption

- Shift in harvesting led to a disconnect between supply and trade in USDA WASDE data in any given year starting in 2001.
- Many trading firms now assign Brazilian production data to the year in which exports occur—USDA has adopted that convention.
- However, traditional method still used by International Cotton Advisory Committee and *Cotton Outlook*.

Past overestimate of Brazil stocks: The October 2023 production data shift lowers WASDE Brazil cotton ending stock estimate as much as 10.6 million bales

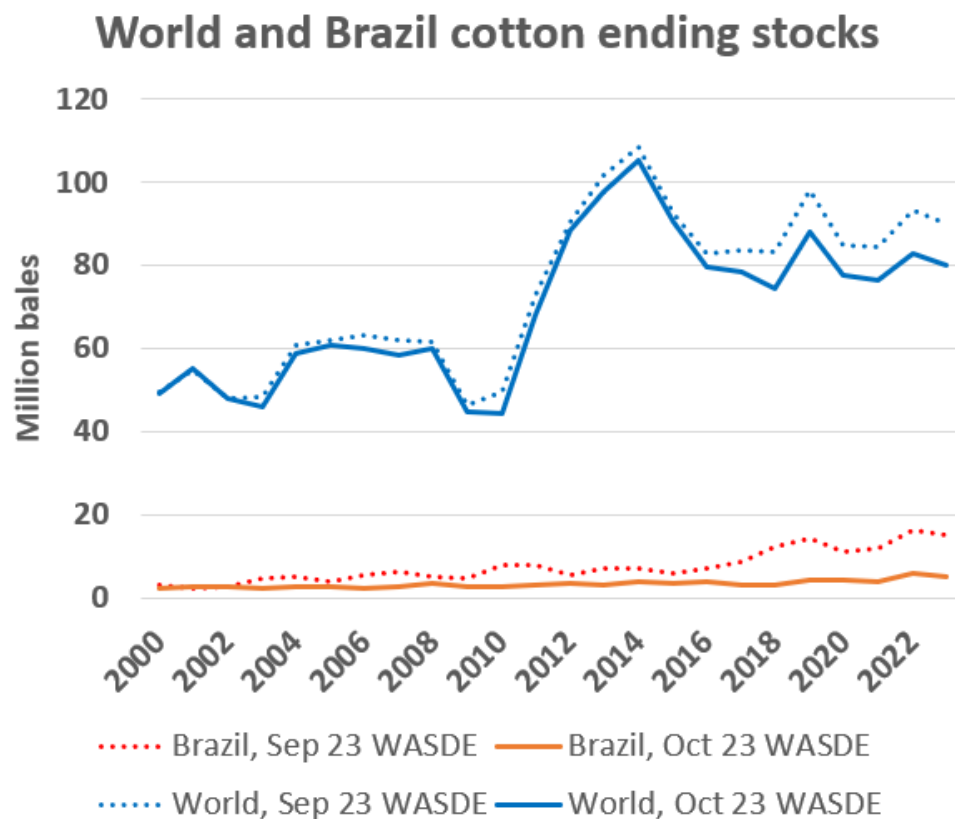
Brazil cotton production and ending stocks



- Since MY2000, WASDE has effectively placed Brazil's entire crop into ending stocks
 - In actuality, the cotton is largely harvested in the first months of the next Aug-Jul year, and then exported in that year.
 - With production approaching 15 million bales, WASDE ending stock estimate was likely as much as 10.6 million bales above actual July 31 levels.

Lower Brazilian ending stocks result in 10 percent reduction in world ending stocks over MY2019-MY2023, smaller reductions in earlier years

MY	Brazil, Sep 23 WASDE	Brazil, Oct 23 WASDE	World, Sep 23 WASDE	World, Oct 23 WASDE
	Th. Bales	Th. Bales	Th. Bales	Th. Bales
1999	2393	2393	51120	51120
2000	2968	2420	49611	49063
2001	2377	2622	54744	54989
2002	2756	2630	47951	47825
2003	4487	2236	48382	46131
2004	4942	2746	60969	58773
2005	3736	2740	61940	60944
2006	5528	2292	63055	59819
2007	6371	2775	62045	58449
2008	5212	3396	61719	59903
2009	4553	2837	46541	44825
2010	8006	2770	49743	44511
2011	7863	3007	72944	68112
2012	5541	3285	90469	88257
2013	7218	3022	101774	97638
2014	7112	3696	108595	105312
2015	5709	3553	92318	90235
2016	6929	3673	82701	79468
2017	8657	3201	83783	78324
2018	12256	3020	83395	74205
2019	14404	4388	98016	87921
2020	11119	4063	84810	77752
2021	11836	3880	84502	76541
2022	16388	5752	93177	82835
2023	15108	5072	89961	79924



August-July marketing years

Foreign Agricultural Service (FAS) and Economic Research Service (ERS) reports for October 2023

- Further discussion of October 2023 WASDE cotton changes:
 - FAS, *Cotton: World Markets and Trade*, released Oct. 12, 2023
 - <https://www.fas.usda.gov/data/cotton-world-markets-and-trade>
 - FAS, *World Agricultural Production*, released Oct. 12, 2023
 - <https://www.fas.usda.gov/data/world-agricultural-production>
 - ERS, *Cotton and Wool Outlook*, released Oct. 16, 2023
 - <https://www.ers.usda.gov/topics/crops/cotton-and-wool/>