



For farmers and price analysts alike, most every discussion of “crop fundamentals,” or supply and demand, begins with an estimate of PLANTED ACRES, and not surprisingly, there’s seldom agreement. The process that analysts and the World Agricultural Outlook Board (WAOB) go through begins with planted acres, adjusted for how many acres will be harvested and at what yield, and end with how many bushels will be fed, processed, held for seed and ultimately, carried over to the next crop marketing year. When we demand more than we can supply, prices increase (and we may want to price more of our crop later), when we supply more than the market can use, prices will weaken (and we may want to price more early, before prices decline).

In fact, knowing how many acres are planted is so important, USDA’s National Agricultural Statistics Service (NASS) is required by law<sup>1</sup> to produce estimates for several key crops, beginning as early as March, with the Prospective Plantings Report. This year’s report, released on March 31, 2020, was based primarily on surveys of farmers conducted during the first two weeks of March, and included a sample size of approximately 80,000 US farm operators selected from a list of farmers that ensured that all operations had a chance to be selected. Like all NASS surveys, data was collected by mail, internet, telephone, and personal interviews.

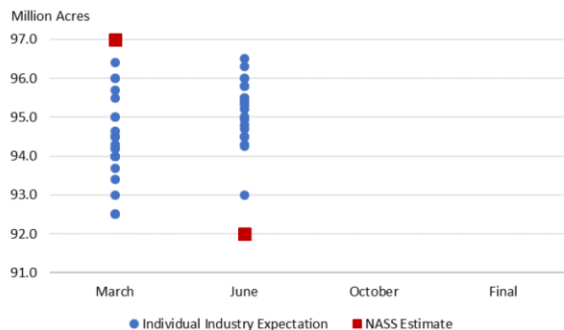
Three months later, NASS released their June Crop Acreage Report, which included two surveys; a survey of over 70,000 farmers, asking them how many acres they had planted and still intended to plant, and the USDA Area Survey, which included over 11,000 individual (~ one square mile) segments, in which enumerators physically inspect, to see what has been planted (and then ask the farmers what will be planted on any unplanted tracts in the segment). The results from these two surveys are combined with satellite and other available data to complete the June Crop Acreage estimates.

So, before the spring crops are even completely in the ground, NASS has provided two, point-in-time, comprehensive, survey-based estimates of how many acres will be planted. Why? Because they are required to by law, and more importantly, “markets” need information. Even before March, many farmers are, or are considering, marketing portions of their expected production. To make the most informed pricing decision they can, farmers, agribusiness and even speculators need as accurate a picture as possible as to what market fundamentals are and how those fundamentals are changing as the year progresses. USDA’s NASS and WAOB provide this objective information and analysis to all market participants at the same time, at no cost.

With or without USDA, market participants are constantly forming opinions regarding crop fundamentals.



**2020 United States Corn Acres**  
Industry Expectations vs NASS



The chart at left compares how USDA-NASS corn acre estimates differed from those of a pool of market analysts giving (or more likely selling) their analysis and advice this year.

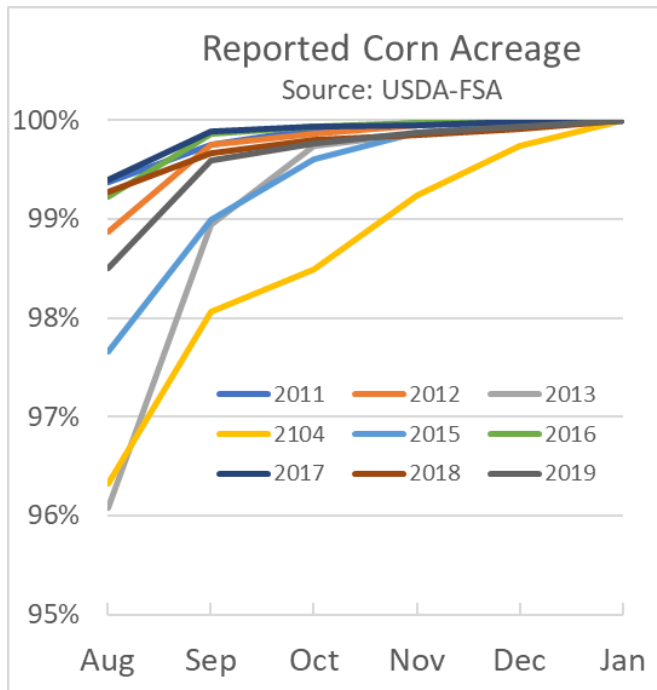
While NASS’s soybean estimates were more “in-line” with industry expectations, both 2020 corn estimates were out of the range of industry expectations, and the corn market definitely reacted as this NEW information filtered into market participants perceptions of “corn fundamentals.”

On 3/31/20, December corn futures closed down \$0.02, and the following day were down another \$0.10 per bushel.

On 6/30/20, they closed up \$0.16, and the next day up another \$0.10 per bushel as the market anticipated a smaller 2020 corn crop.

<sup>1</sup> NASS responsibilities are authorized under the Agricultural Marketing Act of 1946 (7 U.S.C. 1621-1627) and the Census of Agriculture Act of 1997 (P.L. 105-113; 7 U.S.C. 2204g).

**But isn't there better information somewhere?** What about the USDA Farm Service Agency (FSA) or Risk Management Agency (RMA)? EVERY farmer participating in FSA programs such as ARC and PLC or receive marketing assistance loans or deficiency payments must file an FSA-578 Report of Acreage! Yes, but the acreage reporting deadline is July 15 for both FSA and RMA (not March or June), and not every farmer gets it in on time, and not every county office gets the data inputted immediately.



As a result, the August Farm Service Agency monthly report underestimates planted acreage. But FSA totals rapidly approach their final acreage estimate (2014 exception), and by November the acreage for corn and soybeans (99.9%) and grain sorghum (99.8%) have nearly arrived at the final level.

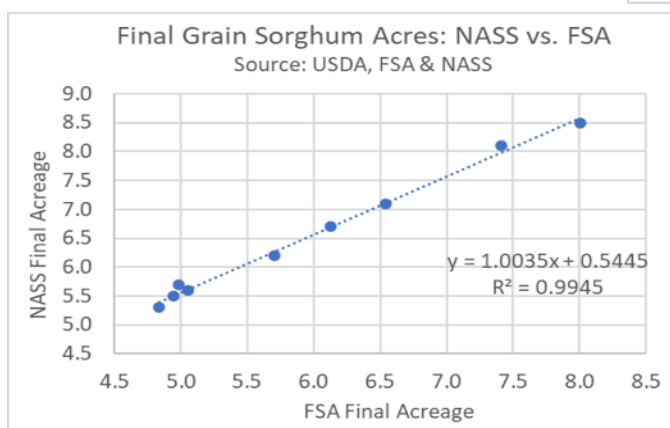
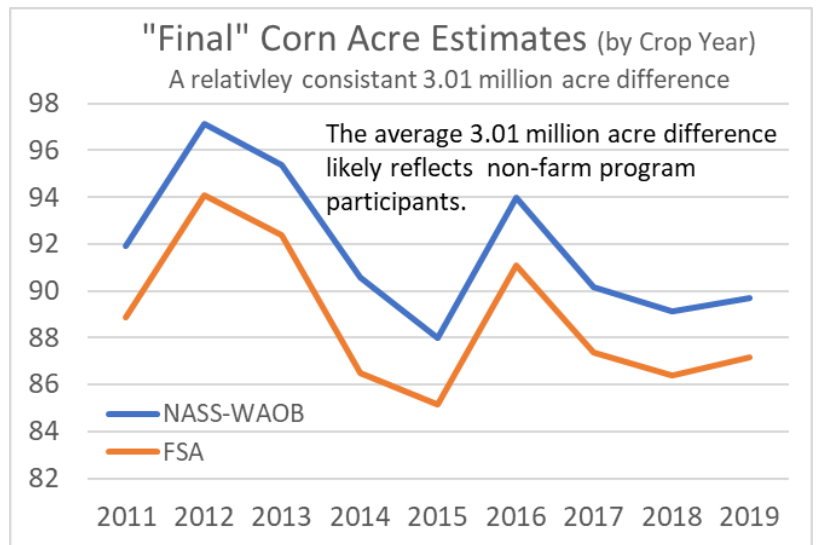
Note: As early as October, FSA reported acreage data is reviewed by NASS, and used as a supplement to their survey-based planted acreage estimates.

Uh-oh, but not every farmer participates in FSA programs. True, and the chart below compares FSA and NASS-WAOB acreage estimates, suggesting there is an average 3.01 million acres of corn grown each year by farmers that do not participate in FSA programs, or roughly 3.3% of FSA reported acreage.

Soybean and grain sorghum estimates between the January (final) FSA and NASS-WAOB acreage are

also closely related, with soybeans having an average 1.3-million-acre difference, or 1.65% of FSA reported acreage, and grain sorghum a 570,000-acre difference, representing a more significant, 9.5% of FSA reported acres.

Another way of looking at this, is as an X/Y graph. The chart below illustrates US grain sorghum, and both the consistency in estimates and the roughly 500,000 + acre difference on average, reflected in NASS-WAOB January estimates versus FSA totals.

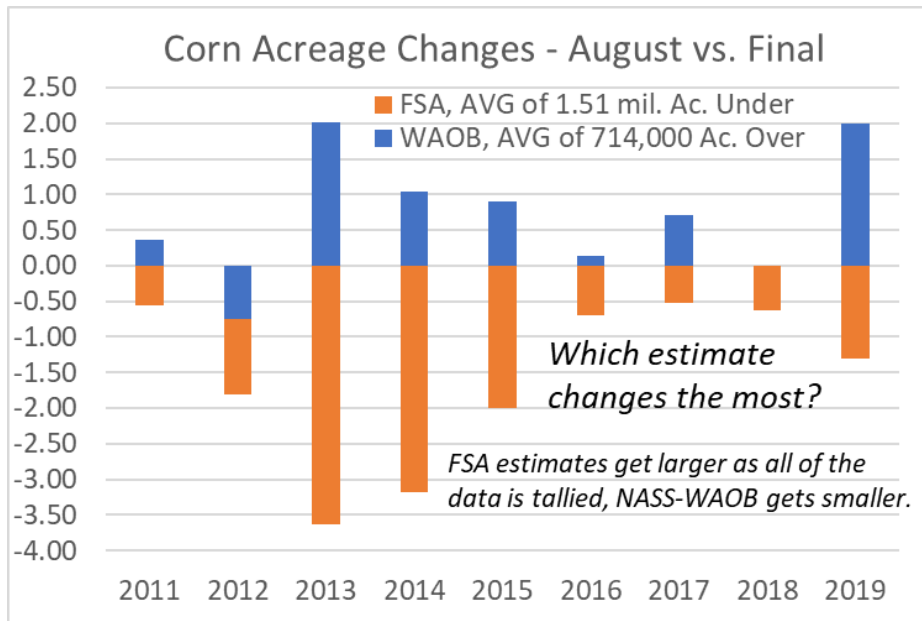


**Summing Up** – NASS acreage and production reports, and WAOB supply and use estimates are considered by many to be the “final word” because they are: Unbiased, meaning they are not bought, sold, or influenced by either buyers or sellers of commodities; Timely, providing data well in advance of when it would be available from other sources; Consistent, following the same statistically sound procedures each time, building a multi-year database; and Transparent, ensuring that ALL participants have equal access to the information.

**How do NASS and FSA estimates change and compare over time?** – NASS acreage estimates are made in March and June and the first FSA estimates are in August. When available, the WAOB uses NASS data for their World Agricultural Supply/Demand Estimates, thus in August, WAOB is essentially still using the NASS June estimate. For this analysis, we'll start with what NASS-WAOB and FSA are quoting in August and compare the changes from then until January. The table below compares the August and January planted corn acreage estimates for both NASS-WAOB and FSA from 2011 to the present. A few observations include:

1. NASS estimates in Jun/Aug are typically above the Jan/Final, which follows, since not all intended acreage will always get planted
2. FSA acreage calculations always get larger as data is slowly collected and recorded.
3. The last column depicts the difference in estimated acreage in January, showing the average 3.01-million-acre difference, due likely, to those farmers not enrolled in any government programs.

US Planted Acreage Estimates at a point in time (millions of acres)								
Crop Year	-- NASS-WAOB Corn --			----- FSA Corn -----			August	January
	Jun - Aug	Jan	Diff.	Aug	Jan	Diff.	FSA - WAOB	FSA - WAOB
2011	92.28	91.92	0.36	88.31	88.86	-0.56	-3.98	-3.06
2012	96.41	97.16	-0.75	93.01	94.07	-1.06	-3.40	-3.09
2013	97.38	95.37	2.01	88.77	92.40	-3.63	-8.61	-2.97
2014	91.64	90.60	1.04	83.32	86.51	-3.18	-8.32	-4.09
2015	88.90	88.00	0.90	83.15	85.14	-2.00	-5.75	-2.86
2016	94.15	94.00	0.14	90.36	91.07	-0.70	-3.78	-2.94
2017	90.89	90.17	0.72	86.83	87.36	-0.53	-4.05	-2.81
2018	89.13	89.13	0.00	85.77	86.40	-0.63	-3.36	-2.73
2019	91.70	89.70	2.00	85.87	87.18	-1.30	-5.83	-2.52
2020	92.01			81.12			-10.88	
AVG	92.50	91.78	0.714	87.27	88.78	-1.510	-5.23	-3.01
StDev	2.96	3.09	0.91	3.22	3.06	1.18	2.05	0.44



The chart at left illustrates the variability and year-to-year differences in the corn acreage estimates from both FSA and NASS-WAOB. Clearly over the last nine years, the August acreage estimates from NASS-WAOB have been less variable, and on average, more accurate.

### What about 2020?

This year, the initial FSA vs. NASS acreage comparisons show the largest differences in the last 10 years for both corn and soybeans, while, grain sorghum is near its average.

Clearly, in this COVID clouded year, everything is more uncertain, as the FSA waived the late fee for 30 days this summer, giving farmers until mid-August to report their acreage. Has this had a significant impact?

US Planted Acreage Estimates (millions of acres)			
US Planted Acreage (millions of acres)	NASS WAOB	FSA	FSA - WAOB
Corn, Aug 2020	92.01	81.12	-10.88
Soybeans, Aug 2020	83.83	75.91	-7.92
Total, Aug 2020	175.83	157.03	-18.80
Total, Aug 9-Yr AVG	174.92	166.09	-8.83

At left we show total corn and soybean acreage for both FSA and NASS-WAOB. In 2020, the total NASS estimate is 175.83 million acres (about a million acres over the 9-year average for August). FSA's 157.03-million-acre total is 6 million acres under the previous 9-year average. Is NASS missing a slight shift away from corn and beans in 2020 or is FSA behind due to the later reporting date?

The University of Illinois has more on this topic [HERE](#).

US Planted Acreage Estimates at a point in time (millions of acres)								
Crop Year	NASS-WAOB Soybeans			----- FSA Beans -----			August	January
	Jun - Aug	Jan	Diff.	Aug	Jan	Diff.	FSA - WAOB	FSA - WAOB
2011	75.21	74.98	0.23	73.18	73.77	-0.59	-2.03	-1.20
2012	76.08	77.20	-1.12	74.91	75.88	-0.97	-1.17	-1.32
2013	77.73	76.53	1.19	72.06	75.30	-3.24	-5.67	-1.23
2014	84.84	83.70	1.14	79.25	81.76	-2.51	-5.59	-1.94
2015	85.14	82.65	2.49	79.48	81.37	-1.89	-5.66	-1.28
2016	83.69	83.43	0.25	81.37	82.11	-0.74	-2.32	-1.33
2017	89.51	90.14	-0.63	88.22	88.75	-0.53	-1.29	-1.39
2018	89.56	89.20	0.36	86.95	87.97	-1.01	-2.60	-1.23
2019	80.04	76.10	3.94	74.00	75.08	-1.08	-6.04	-1.02
2020	83.83			75.91			-7.92	
AVG	82.42	81.55	0.874	78.82	80.22	-1.396	-3.60	-1.33
StDev	5.43	5.69	1.56	5.89	5.60	0.94	2.08	0.25

US Planted Acreage Estimates at a point in time (millions of acres)								
Crop Year	-- NASS-WAOB Milo --			- FSA Grain Sorghum -			August	January
	Jun - Aug	Jan	Diff.	Aug	Jan	Diff.	FSA - WAOB	FSA - WAOB
2011	5.35	5.50	-0.16	4.86	4.95	-0.09	-0.49	-0.55
2012	6.21	6.20	0.01	5.56	5.71	-0.15	-0.65	-0.50
2013	7.20	8.10	-0.90	7.03	7.41	-0.39	-0.17	-0.69
2014	7.47	7.10	0.37	6.17	6.54	-0.37	-1.30	-0.56
2015	8.84	8.50	0.34	7.61	8.01	-0.40	-1.23	-0.49
2016	7.23	6.70	0.52	6.05	6.13	-0.08	-1.18	-0.57
2017	5.99	5.60	0.39	4.94	5.05	-0.11	-1.04	-0.55
2018	6.04	5.70	0.34	4.86	4.98	-0.12	-1.18	-0.72
2019	5.13	5.30	-0.18	4.75	4.84	-0.08	-0.37	-0.46
2020	5.62			4.91			-0.71	
AVG	6.60	6.52	0.08	5.76	5.96	-0.20	-0.85	-0.57
StDev	1.18	1.17	0.45	1.04	1.16	0.14	0.43	0.09

