Food & Agricultural
Policy Research Institute
University of Missouri

Agricultural Markets
& Policy
University of Missouri

Baseline Update for U.S. Farm Income and the Farm Balance Sheet

September 2020

FAPRI-MU Report #05-20

www.fapri.missouri.edu
amap.missouri.edu

Published by the Food and Agricultural Policy Research Institute (FAPRI) at the University of Missouri (MU), 200 Mumford Hall, Columbia, MO 65211. FAPRI–MU is part of the Division of Applied Social Sciences (DASS) in the College of Agriculture, Food and Natural Resources (CAFNR).

http://www.fapri.missouri.edu

This material is based upon work supported by the U.S. Department of Agriculture, under Agreement No. 58-0111-19-011 and the USDA National Institute of Food and Agriculture, Hatch project number MO-C1537173.

Any opinion, findings, conclusions, or recommendations expressed in this publication are those of the authors and do not necessarily reflect the view of the U.S. Department of Agriculture nor the University of Missouri.

Contact authors: Pat Westhoff (westhoffp@missouri.edu) and Seth Meyer (meyerse@missouri.edu).

Permission is granted to reproduce this information with appropriate attribution to the authors and FAPRI–MU.

The University of Missouri–Columbia does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, age, genetics information, disability or status as a protected veteran. For more information, call Human Resource Services at 573-882-4256 or the US Department of Education, Office of Civil Rights.

Table of contents

Summary 2
U.S. government outlays 3
U.S. government payments (farm income accounts) 3
U.S. farm cash receipts 4
U.S. farm production expenses 4
U.S. farm income 5
U.S. farm balance sheet 5

Summary

Record government payments to farmers, tied to COVID-19 relief efforts, support farm income in 2020. If no new government programs are made available, government payments and net farm income both decline sharply in 2021.

This report utilizes commodity supply, demand and price projections from the FAPRI-MU baseline update released in August 2020 (FAPRI-MU Report #04-20, available at www.fapri.missouri.edu). Historical farm income figures are from USDA's Economic Research Service, and reflect the revision made in early September 2020 to previous estimates of 2019 farm production expenses and farm income.

These baseline estimates reflect policies in place in late August 2020. Based on existing program rules, Coronavirus Food Assistance Program (CFAP) payments are assumed to total $11 billion in 2020. The 2020 farm income estimates also incorporate Market Facilitation Program (MFP) payments associated with 2019 production that were made in the early months of 2020, as well as $5.8 billion in benefits under the Paycheck Protection Program (PPP).

Additional support programs may be developed in the future, but they are not included in these baseline projections. This is one source of difference between these estimates and those of the Economic Research Service, which assumed that the full $16 billion allocated to CFAP would be used to make payments in 2020.

Given all of the assumptions of the analysis, here are a few highlights of the results:

- Net farm income increases by $15 billion in 2020, despite a notable decline in farm receipts, on record large direct government payments, falling expenses and stable inventory values.
- An alternative measure, net cash income, is largely unchanged in 2020. The main difference between the two measures is in the treatment of inventory changes.
- With no CFAP, PPP or MFP benefits assumed in 2021, government payments fall by more than 50 percent. As other factors offset each other, the result is a $16 billion reduction in net farm income in 2021, and net cash income declines almost as much.
- In later years, projected increases in farm commodity prices and production outweigh increases in production expenses, and net farm income increases. However, inflation-corrected real net farm income remains below the 2020 level through 2025.
- Cash receipts are down sharply in 2020, as receipts for livestock and poultry, feed grains and cotton fall, on price declines. Cash receipts increase in 2021 and jump in 2022 as an assumed macroeconomic recovery takes hold.
- Farm production expenses fall in 2020, with declines in fuel, purchased livestock and interest expenses only partially offset by increases in labor and fertilizer costs. Projected expenses increase by about 0.5 percent in 2021 and then rise more rapidly in later years with economic recovery.
- CFAP payments help push direct government payments to record highs in 2020. While $16 billion was allocated for CFAP, the pace of payments to date ($9.4 billion as of August 31) suggest actual payments will be less under the current program guidelines. No reallocation of residual CFAP funds or spending under a CFAP2 are included in these baseline projections, although both are possibilities.
- In 2019, crop production was reduced by spring flooding and the result was a significant reduction in end-of-year inventories held by farmers. This change in inventories reduced net farm income relative to net cash income in 2019. More normal growing conditions in 2020 and subsequent years are projected to result in little annual change in December 31 inventory values. Relative to 2019, this boosts net farm income estimates in 2020 and beyond.
- Given projected levels of farm income and other factors, the baseline shows relatively stable values of farm real estate and other farm assets. Farm debt, on the other hand, continues to grow at a modest rate. The farm debt-to-asset ratio has increased in every year since 2013, and that trend continues through 2025.

U.S. government outlays

Fiscal year	2018	2019	2020	2021	2022	2023	2024	2025
Commodity Credit Corp.				(Million dollars)				
Farm bill commodity programs	7,709	3,437	3,041	6,618	8,868	6,529	5,065	4,203
Corn	3,024	595	331	1,009	3,771	2,593	1,642	1,180
Wheat	1,957	1,049	463	1,719	1,774	1,437	1,377	1,252
Soybeans	225	270	157	827	326	189	125	63
Upland cotton	290	-77	643	1,312	1,315	913	684	570
Rice	828	495	590	350	413	458	421	410
Other major crops & dairy	1,383	1,105	858	1,401	1,270	940	816	728
Other CCC-funded programs	3,175	17,952	17,583	3,285	3,275	3,311	3,337	3,269
Market facilitation program	38	13,678	9,405	0	0	0	0	0
CFAP (CCC portion)*	0	0	3,387	0	0	0	0	0
Conservation (CCC portion)	1,955	1,904	1,891	1,958	2,083	2,117	2,142	2,074
Disaster and all other	1,182	2,370	2,901	1,327	1,192	1,194	1,195	1,195
Total CCC programs	10,884	21,389	20,625	9,903	12,143	9,840	8,402	7,472
Non-CCC programs								
Crop insurance	6,525	10,286	8,759	7,826	7,740	8,013	8,281	8,469
CFAP (non-CCC portion)*	0	0	7,613	0	0	0	0	0
Paycheck protection program	0	0	5,800	0	0	0	0	0
NRCS conservation	3,082	3,085	3,573	3,705	3,745	3,833	3,679	3,798
Non-CCC disaster and all other	0	0	1,848	924	0	0	0	0
Total non-CCC programs	9,607	13,371	27,592	12,455	11,485	11,846	11,960	12,267
Total, CCC & non-CCC	20,491	34,760	48,217	22,358	23,629	21,686	20,363	19,739

Note: Fiscal years begin on Oct. 1 (FY 2020: Oct. 1, 2019 to Sep. 30, 2020).
*Part of the cost of the Coronavirus Food Assistance Program (CFAP) is included in CCC accounts; the remainder appears under Non-CCC programs.

U.S. government payments (farm income accounts)

Calendar year	2018	2019	2020	2021	2022	2023	2024	2025
				(Million dollars)				
Price loss coverage	2,065	1,945	4,623	7,729	5,912	4,572	3,847	3,408
Agriculture risk coverage	1,109	710	1,076	770	474	352	231	196
Market facilitation program	5,127	14,203	3,753	0	0	0	0	0
Coronavirus food assistance	0	0	11,000	0	0	0	0	0
Paycheck protection program	0	0	5,800	0	0	0	0	0
Conservation programs	3,987	3,830	4,176	4,373	4,479	4,585	4,468	4,505
Emergency and disaster	916	1,448	1,734	1,709	786	786	786	786
All other	466	311	621	721	406	184	166	143
Total direct payments	13,669	22,447	32,782	15,302	12,057	10,478	9,499	9,038

U.S. farm cash receipts

Calendar year	2018	2019	2020	2021	2022	2023	2024	2025
				(Billion dollars)				
Feed grains	57.34	59.69	55.42	56.93	59.82	61.99	63.38	64.43
Food grains	12.12	11.79	11.75	11.31	11.20	11.25	11.37	11.59
Oilseeds	39.47	36.32	36.91	39.77	41.57	42.69	43.26	43.61
Cotton	7.48	7.11	5.89	6.34	6.89	7.26	7.54	7.75
Sugar	2.40	2.30	2.50	2.51	2.55	2.57	2.59	2.61
Other crops	76.29	77.42	81.32	80.84	82.89	84.85	86.62	88.39
Cattle	67.04	66.24	61.81	64.94	69.45	72.48	74.00	83.06
Hogs	20.88	22.02	18.50	19.82	22.26	23.18	23.23	26.90
Dairy products	35.24	40.50	39.07	37.20	39.26	41.19	42.06	45.77
Poultry, eggs	46.24	40.36	37.23	40.15	42.83	44.75	46.39	49.72
Other livestock	6.93	6.88	6.57	6.78	7.12	7.35	7.50	8.46
Total cash receipts	371.42	370.64	356.96	366.58	385.84	399.56	407.94	434.77

U.S. farm production expenses

Calendar year	2018	2019	2020	2021	2022	2023	2024	2025
				(Billion dollars)				
Feed	53.84	59.44	58.93	58.17	59.74	61.27	62.08	62.63
Purchased livestock	29.15	28.66	26.56	27.14	29.08	30.09	30.53	31.03
Seed	21.92	21.21	21.37	21.24	21.27	21.56	21.97	22.42
Fertilizer and chemicals	38.65	37.85	38.50	39.07	40.56	41.61	42.14	42.96
Fuels and electricity	19.24	18.94	18.09	18.74	20.62	21.79	22.44	23.24
Interest	20.64	20.66	17.63	16.68	16.09	15.72	15.56	15.59
Contract and hired labor	33.80	34.72	35.89	35.99	37.09	38.25	39.41	40.58
Capital consumption	29.93	28.81	28.24	28.15	28.11	28.15	28.31	28.47
Rent to landlords	15.47	16.81	16.70	16.79	16.43	16.40	16.54	16.68
All other	81.18	81.61	82.77	84.24	86.62	88.85	90.64	92.49
Total production expenses	343.81	348.72	344.69	346.20	355.61	363.69	369.62	376.09

U.S. farm income

Calendar year	2018	2019	2020	2021	2022	2023	2024	2025
				(Billion dollars)				
Farm receipts	400.6	405.4	391.8	395.5	415.7	430.5	439.8	447.7
Crops	195.1	194.6	193.8	197.7	204.9	210.6	214.8	218.4
Livestock	176.3	176.0	163.2	168.9	180.9	189.0	193.2	196.5
Farm-related	29.1	34.7	34.8	29.0	29.8	30.9	31.9	32.8
Direct government payments	13.7	22.4	32.8	15.3	12.1	10.5	9.5	9.0
Gross cash income	414.2	427.8	424.5	410.8	427.7	441.0	449.3	456.7
Nonmoney income	19.1	18.4	18.9	19.0	18.9	18.9	19.0	19.0
Value of inventory change	-8.2	-13.7	-0.2	-1.5	-0.3	0.0	0.3	0.4
Gross farm income	425.1	432.4	443.3	428.3	446.4	459.9	468.6	476.1
Cash expenses	311.4	317.5	313.9	315.7	325.1	333.1	338.9	345.2
Total expenses	343.8	348.7	344.7	346.2	355.6	363.7	369.6	376.1
Net cash income	102.8	110.3	110.6	95.1	102.7	107.9	110.5	111.6
Net farm income	81.3	83.7	98.6	82.2	90.8	96.2	99.0	100.1
Deflated (2020 $)	84.7	85.2	98.6	81.2	88.9	92.9	93.9	93.3

U.S. farm balance sheet

Calendar year	2018	2019	2020	2021	2022	2023	2024	2025
Farm assets				(Billion dollars)				
Real estate	2,510	2,546	2,550	2,586	2,561	2,549	2,561	2,559
All other	517	529	534	523	521	515	519	522
Total assets	3,027	3,075	3,084	3,109	3,082	3,065	3,080	3,081
Farm debt								
Real estate	246	267	281	290	295	298	300	301
All other	156	152	149	148	151	155	158	161
Total debt	402	419	430	438	446	453	458	463
Debt/asset ratio	13.3%	13.6%	13.9%	14.1%	14.5%	14.8%	14.9%	15.0%