



Food & Agricultural
Policy Research Institute
University of Missouri

International Biofuels Baseline Update

September 2017

FAPRI-MU Report #04-17

www.fapri.missouri.edu

Published by the Food and Agricultural Policy Research Institute (FAPRI) at the University of Missouri (MU), 101 Park DeVill Drive, Suite E; Columbia, MO 65203. FAPRI–MU is part of the Division of Applied Social Sciences (DASS) in the College of Agriculture, Food and Natural Resources (CAFNR).

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This material is based upon work supported by the U.S. Department of Agriculture, under Agreement No. 58-0111-16-011 and the USDA National Institute of Food and Agriculture, Hatch project number MO-HASS0024.

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.

The projections in this report were prepared by the team at FAPRI-MU, including Deepayan Debnath (debnathd@missouri.edu), Jarrett Whistance (whistancejl@missouri.edu), Pat Westhoff (westhoffp@missouri.edu), and Julian Binfield (binfieldj@missouri.edu). Special thanks to Wyatt Thompson (thompsonw@missouri.edu) for providing feedback on earlier versions of this report.

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Summary

This report provides an update to the 2017 International Biofuels Baseline, and the projections reported here are based on Food and Agricultural Policy Research Institute (FAPRI) 2017 Baseline Update. Changes in market conditions and biofuel policies in major biofuel producing and consuming countries are taken into account. This work is concurrent with the broader FAPRI baseline update for biofuel and agricultural commodity markets, so results take into account changing conditions in key feedstock and co-product markets as of August 2017 including the recently announced U.S. anti-dumping duties on Argentinean and Indonesian biodiesel and the Brazilian tariff on imports of U.S. ethanol. Macroeconomic assumptions (see table below) are based primarily on July 2017 forecasts by IHS Markit. The main objectives of this report are to update the near-term baseline biofuels outlook and to provide a benchmark for performing scenario analysis. Biofuel demand is driven mainly by the crude oil price projections (shown below) and policies, such as use mandates that are imposed by some countries.

Macroeconomic assumptions*

Calendar year	2016	2017	2018	2019	2020	2021	2022
Crude oil price							
			(U.S. dollars per barrel)				
West Texas intermediate oil	43.21	49.14	45.79	53.42	67.93	74.52	80.34
Refiners acquisition oil	40.60	45.47	41.76	48.24	60.48	67.45	73.97
Real GDP growth			(Percent change from previous year)				
World	2.35	2.87	3.02	3.00	2.98	3.10	3.07
Argentina	-2.20	2.21	2.86	3.35	3.21	3.19	2.77
Brazil	-3.60	0.18	1.68	3.46	3.83	3.23	3.23
Canada	1.47	2.73	2.31	2.32	2.02	2.09	2.05
European Union	1.85	2.02	1.80	1.69	1.70	1.76	1.73
Indonesia	5.03	5.17	5.32	5.47	5.02	5.10	4.93
Malaysia	4.22	4.89	4.76	4.93	4.76	4.98	4.97
Rest of World	3.37	3.66	3.80	3.88	3.89	4.06	4.06
Population growth			(Percent change from previous year)				
World	1.15	1.11	1.09	1.07	1.04	1.02	0.99
Argentina	0.99	0.97	0.95	0.93	0.91	0.89	0.87
Brazil	0.83	0.80	0.77	0.74	0.72	0.69	0.66
Canada	1.14	1.23	1.10	1.13	1.13	1.11	1.10
European Union	0.42	0.17	0.12	0.11	0.10	0.08	0.07
Indonesia	1.17	1.12	1.08	1.04	1.01	0.98	0.95
Malaysia	1.39	1.34	1.30	1.28	1.25	1.23	1.21
Rest of World	1.25	1.23	1.20	1.17	1.15	1.12	1.09
Exchange rates			(Currency per U.S. dollar)				
Argentina Peso	14.78	16.49	17.74	18.22	18.76	19.49	20.12
Brazil Real	3.49	3.27	3.53	3.76	3.91	4.02	4.08
Canada Dollar	1.33	1.31	1.30	1.25	1.21	1.18	1.16
European Union Euro	0.90	0.91	0.91	0.87	0.83	0.80	0.78
Indonesia Rupiah	13,307	13,361	13,971	13,527	13,306	13,375	13,479
Malaysia Dollar	4.15	4.37	4.53	4.52	4.36	4.26	4.18

*Source: IHS Markit, July 2017

Ethanol, biodiesel and soybean oil prices

Calendar year	2016	2017	2018	2019	2020	2021	2022
Ethanol Price							
							(U.S. dollars per gallon)
Anhydrous Santos F.O.B. (Brazil)	0.52	0.55	0.60	0.61	0.61	0.61	0.61
Omaha Rack (U.S.)*	0.41	0.44	0.45	0.45	0.46	0.46	0.46
Biodiesel Price							
							(U.S. dollars per gallon)
Rosario, Argentina F.O.B. (incl. export tax)	3.13	2.52	2.54	2.76	2.87	2.95	3.12
European Union Antwerp-Rotterdam -Amsterdam (ARA) F.O.B.	3.40	3.84	4.07	4.25	4.39	4.55	4.72
Soyoil Price**							
							(U.S. dollars per gallon)
Buenos Aires, Argentina F.O.B.	2.66	2.89	2.87	3.10	3.15	3.25	3.25

*See the baseline update for U.S. biofuel and agricultural commodity markets

**International oilseed baseline update book, University of Nevada

Biodiesel production, use, trade and stocks by country

Calendar year	2016	2017	2018	2019	2020	2021	2022
Argentina							
							(Million liters)
Production	3,022	2,454	2,341	2,312	2,353	2,438	2,560
Imports	0	0	0	0	0	0	0
Use	1,174	1,189	1,154	1,165	1,180	1,192	1,227
Exports	1,848	1,348	1,206	1,155	1,169	1,236	1,315
Stocks	265	183	164	156	160	171	188
Brazil							
							(Million liters)
Production	3,801	3,954	4,068	4,245	4,603	4,994	5,390
Imports	18	23	17	17	17	17	17
Use	3,800	3,921	3,964	4,201	4,540	4,832	5,159
Exports	18	17	108	44	32	125	189
Stocks	938	977	990	1,008	1,056	1,111	1,170
European Union							
							(Million liters)
Production	14,457	14,535	15,113	15,447	15,268	15,167	15,114
Imports	573	622	666	682	666	659	655
Use	14,649	14,754	15,377	15,735	15,549	15,446	15,394
Exports	408	403	397	392	386	381	375
Stocks	2,981	2,980	2,984	2,986	2,985	2,984	2,984
Indonesia							
							(Million liters)
Production	2,841	3,463	3,842	4,270	4,614	4,858	5,264
Imports	0	0	0	0	0	0	0
Use	3,008	3,352	3,465	3,699	3,939	4,184	4,435
Exports	476	79	358	550	658	662	808
Stocks	731	763	782	803	820	832	852
Malaysia							
							(Million liters)
Production	911	963	1,017	1,011	1,005	994	986
Imports	0	0	0	0	0	0	0
Use	568	591	614	658	703	750	797
Exports	386	367	400	355	302	245	189
Stocks	35	40	43	41	40	39	39
Rest of World							
							(Million liters)
Production	5,433	5,590	5,712	5,807	5,881	5,938	5,984
Imports	2,406	2,141	2,049	2,070	2,280	2,369	2,535
Use	5,736	5,976	6,153	6,322	6,562	6,745	6,938
Exports	1,691	1,525	1,531	1,541	1,572	1,543	1,547
Stocks	3,209	3,439	3,515	3,530	3,555	3,575	3,609

Feedstock use in biofuel production by country

Calendar year	Output	2016	2017	2018	2019	2020	2021	2022
Argentina		(Thousand MT)						
Maize	Ethanol	1,220	1,445	1,526	1,564	1,625	1,668	1,721
Sugarcane molasses	Ethanol	1,540	1,858	1,953	1,994	2,064	2,110	2,169
Soyoil	Biodiesel	2,700	2,193	2,092	2,065	2,103	2,178	2,287
Brazil		(Thousand MT)						
Sugarcane	Ethanol	342,414	326,276	327,720	332,805	341,254	352,786	367,130
Soyoil	Biodiesel	2,622	2,716	2,783	2,893	3,124	3,376	3,629
Canada		(Thousand MT)						
Maize	Ethanol	3,190	3,200	3,223	3,238	3,267	3,294	3,308
Wheat	Ethanol	945	943	945	945	949	952	951
European Union		(Thousand MT)						
Maize	Ethanol	5,433	5,383	5,348	5,298	5,221	5,068	4,925
Wheat	Ethanol	3,998	3,412	3,347	3,283	3,218	3,149	3,075
Barley	Ethanol	514	509	505	499	492	476	462
Rye	Ethanol	631	627	625	621	614	597	582
Rapeseed oil	Biodiesel	6,140	6,149	6,289	6,469	6,443	6,434	6,433
Others	Biodiesel	6,582	6,642	7,010	7,124	6,993	6,913	6,868
Indonesia		(Thousand MT)						
Palm oil	Biodiesel	3,363	2,796	3,102	3,448	3,725	3,922	4,250
Malaysia		(Thousand MT)						
Palm oil	Biodiesel	802	847	895	890	884	874	867