



Soybean Oil and Biodiesel Usage Projections & Balance Sheet

Updated: 12/18/2009

Year: (production/marketing)^{1/}
Oil Yield, lbs./ bu. of soybeans^{2/}

Mil. Harvested Acres of U.S. Soybeans

U.S. Soybean Production, mil. bu.

U.S. Soybean Yield, per acre

U.S. Domestic Soybean Crush

SB Oil Supplies (Mil. Lbs.):

Production
Beginning carryover
Imports

Total Supply

Usage (Mil. Lbs.):

Margarine
Salad & cooking oils
Baking, frying fats & oils
Other food & industrial
Total food & non-biodiesel industrial
Soy oil biodiesel (methyl ester)^{3/}
Non-soy biodiesel^{4/}

Total domestic soy oil use

Exports

Total Usage

Biodiesel Usage:

Use for biodiesel, bushel equivalent
Mil. acres used for biodiesel
% of U.S. soybean acres used for biodiesel
Soybean oil for biodiesel
% of oil from crop
% of oil from crush
% of domestic food & non-biodiesel use
% of soy oil exports
Soy + non-soy oil for biodiesel, % of mandates

Ending Carryover: (mil. lbs.)

Carryover as percent of supply

Carryover as percent of use

Weeks of use in carryover stocks

Prices:

Soy oil, \$ per cwt., marketing year avg.

	Historic				Prelim.	Projected 2009-2010			Projected 2010-2011		
	2004-05	2005-06	2006-07	2007-08	2008-09	Low	Med.	High	Low	Med.	High
Oil Yield, lbs./ bu. of soybeans ^{2/}	11.4	11.7	11.3	11.5	11.3	11.3	11.4	11.5	11.3	11.4	11.5
Mil. Harvested Acres of U.S. Soybeans	74.0	71.3	74.6	64.1	74.7	76.2	76.6	76.7	75.1	75.5	75.5
U.S. Soybean Production, mil. bu.	3,124	3,063	3,188	2,676	2,967	3,200	3,319	3,375	2,966	3,254	3,322
U.S. Soybean Yield, per acre	42.2	43.0	42.7	41.7	39.7	42.0	43.3	44.0	39.5	43.1	44.0
U.S. Domestic Soybean Crush	1,696	1,739	1,808	1,803	1,662	1,690	1,700	1,705	1,675	1,690	1,710
SB Oil Supplies (Mil. Lbs.):											
Production	19,360	20,387	20,489	20,580	18,746	19,165	19,295	19,522	18,928	19,266	19,665
Beginning carryover	1,076	1,699	3,010	3,085	2,485	2,742	2,742	2,742	2,362	2,362	2,362
Imports	26	35	37	65	90	72	75	54	140	60	55
Total Supply	20,462	22,122	23,536	23,730	21,321	21,979	22,112	22,319	21,430	21,688	22,082
Usage (Mil. Lbs.):											
Margarine	1,227	848	961	902	770	775	770	790	750	780	785
Salad & cooking oils	7,790	8,657	8,708	9,612	9,890	9,175	9,550	9,225	9,300	9,350	9,365
Baking, frying fats & oils	7,938	7,799	6,225	5,271	4,405	4,350	4,400	4,450	4,350	4,400	4,450
Other food & industrial	60	65	(81)	(694)	(587)	8	(450)	10	(20)	10	10
Total food & non-biodiesel industrial	17,015	17,304	15,813	15,091	14,478	14,308	14,270	14,475	14,380	14,540	14,610
Soy oil biodiesel (methyl ester) ^{3/}	424	655	2,762	3,245	1,907	2,175	2,200	2,250	3,500	3,550	3,600
Non-soy biodiesel ^{4/}	138	872	425	2,003	2,516	2,825	2,825	2,825	3,175	3,150	3,150
Total domestic soy oil use	17,439	17,959	18,575	18,335	16,385	16,483	16,470	16,725	17,880	18,090	18,210
Exports	1,324	1,153	1,877	2,911	2,193	3,230	3,280	3,290	1,880	1,900	1,950
Total Usage	18,763	19,112	20,451	21,246	18,579	19,713	19,750	20,015	19,760	19,990	20,160
Biodiesel Usage:											
Use for biodiesel, bushel equivalent	37	56	244	281	169	192	194	197	310	311	313
Mil. acres used for biodiesel	0.88	1.30	5.72	6.74	4.26	4.57	4.47	4.47	7.84	7.23	7.11
% of U.S. soybean acres used for biodiesel	1.2%	1.8%	7.7%	10.5%	5.7%	6.0%	5.8%	5.8%	10.4%	9.6%	9.4%
Soybean oil for biodiesel											
% of oil from crop	1.2%	1.8%	7.7%	10.5%	5.7%	6.0%	5.8%	5.8%	10.4%	9.6%	9.4%
% of oil from crush	2.2%	3.2%	13.5%	15.8%	10.2%	11.3%	11.4%	11.5%	18.5%	18.4%	18.3%
% of domestic food & non-biodiesel use	2.5%	3.8%	17.5%	21.5%	13.2%	15.2%	15.4%	15.5%	24.3%	24.4%	24.6%
% of soy oil exports	32.0%	56.8%	147.2%	111.5%	87.0%	67.3%	67.1%	68.4%	186.2%	186.8%	184.6%
Soy + non-soy oil for biodiesel, % of mandates					93%	87%	87%	88%	95%	96%	96%
Ending Carryover: (mil. lbs.)	1,699	3,010	3,085	2,485	2,742	2,266	2,362	2,304	1,670	1,698	1,922
Carryover as percent of supply	8.3%	13.6%	13.1%	10.5%	12.9%	10.3%	10.7%	10.3%	7.8%	7.8%	8.7%
Carryover as percent of use	9.1%	15.7%	15.1%	11.7%	14.8%	11.5%	12.0%	11.5%	8.5%	8.5%	9.5%
Weeks of use in carryover stocks	4.7	8.2	7.8	6.1	7.7	6.0	6.2	6.0	4.4	4.4	5.0
Prices:											
Soy oil, \$ per cwt., marketing year avg.	\$23.01	\$23.41	\$31.00	\$52.03	\$32.16	\$38.75	\$37.00	\$36.00	\$38.00	\$36.00	\$35.00

By Dr. Robert Wisner, Ag Marketing Resource Center, Iowa State University, 1-515-294-4275, rwwisner@iastate.edu

Notes:

^{1/} Marketing year starts at October 1 of the production year and ends September 30 of the following year, one month later than the soybean marketing year.

^{2/} Oil yield for medium-yield soybean crop in 2008-09 is the 2001-06 average, with a slight increase for 2009-10 and 2010-2011. Actual oil yield varies with weather.

^{3/} Actual production is not available for 2004-05 & 2005-06. Output levels for these years are estimated as residuals after other food use.

^{4/} Non-soy biodiesel is estimated from U.S. Department of Energy, Energy Information Administration monthly data for 2006-07 through 2008-09. Data for later years are tentative projections by Robert Wisner. The DOE monthly data are available at http://www.eia.doe.gov/mer/pdf/pages/sec10_8.pdf

Key Balance Sheet Assumptions:

1. No changes in Conservation Reserve Program
2. Crude oil (petroleum) price stays in \$60-\$75/barrel range for the rest of 2008-09, then gradually increase in the next two years.
3. U.S. ethanol mandates, blending credit, and import tariff are unchanged and enforced in 2010.
4. U.S. & World economies have gradual slowing of growth through 2010.
5. U.S. dollar gradually decreases relative to foreign currencies through 2012.
6. U.S. biodiesel mandates, blending credit, and import tariff are unchanged, with mandates enforced in 2010.

Data Sources:

USDA, Economic Research Service, *Oil Crops Yearbook: Data Set* that is available at

<http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1290>

and the *World Agriculture Supply Demand Reports* that are available at

<http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1194>

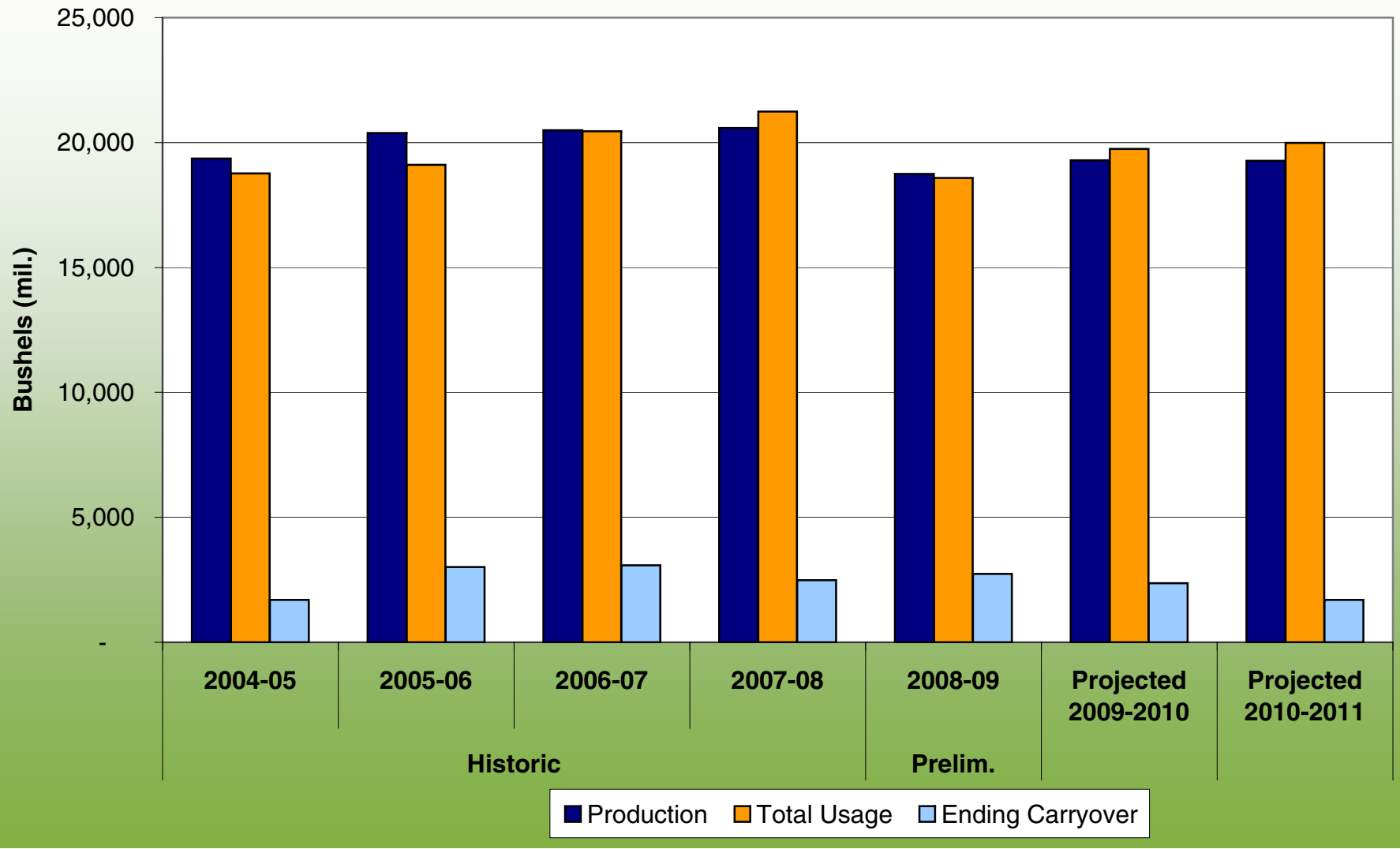
Projections for 2009-1 and 2010-11 are by Wisner

... and justice for all

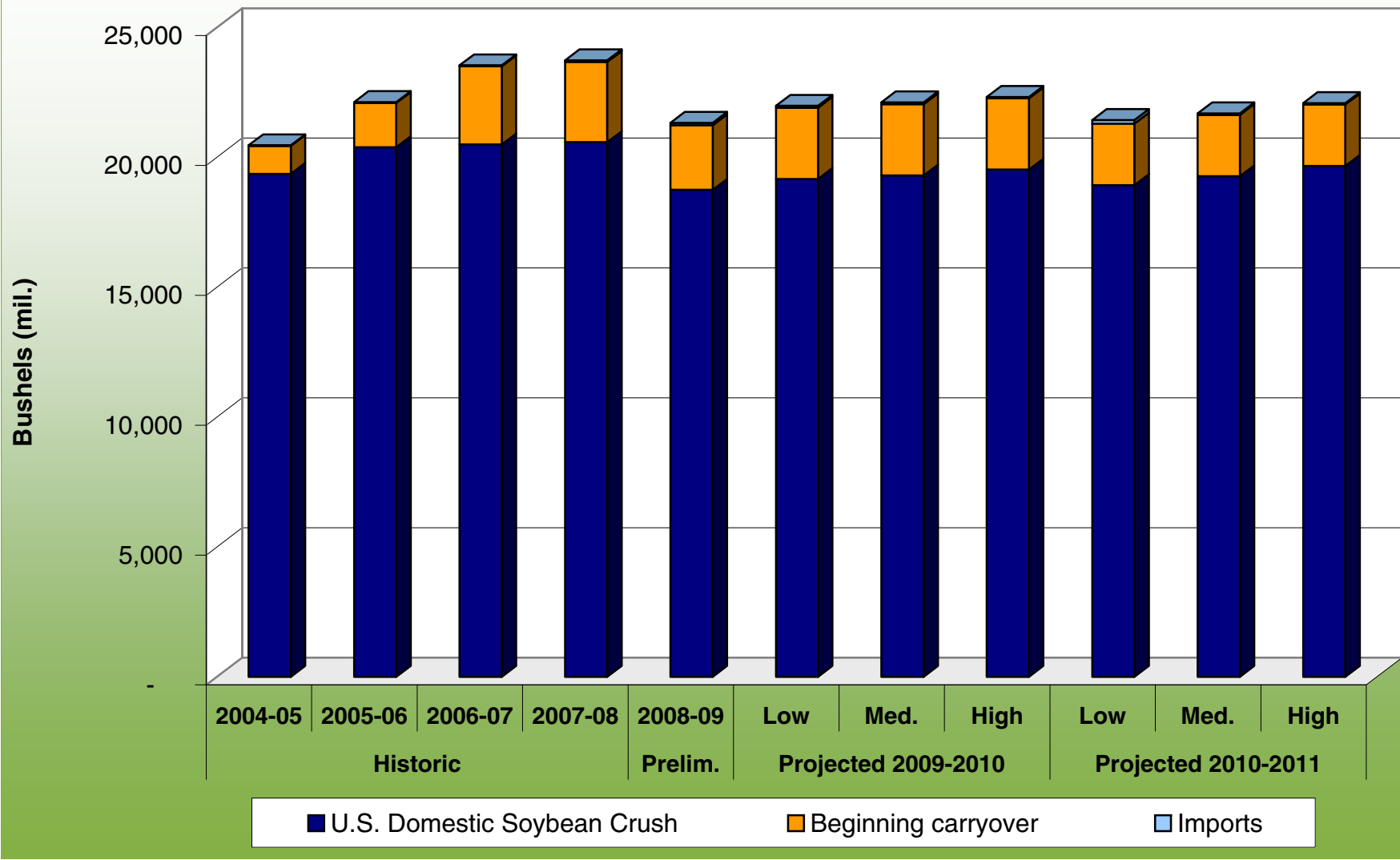
The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Many materials can be made available in alternative formats for ADA clients. To file a complaint of discrimination, write USDA, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Jack M. Payne, director, Cooperative Extension Service, Iowa State University of Science and Technology, Ames, Iowa.

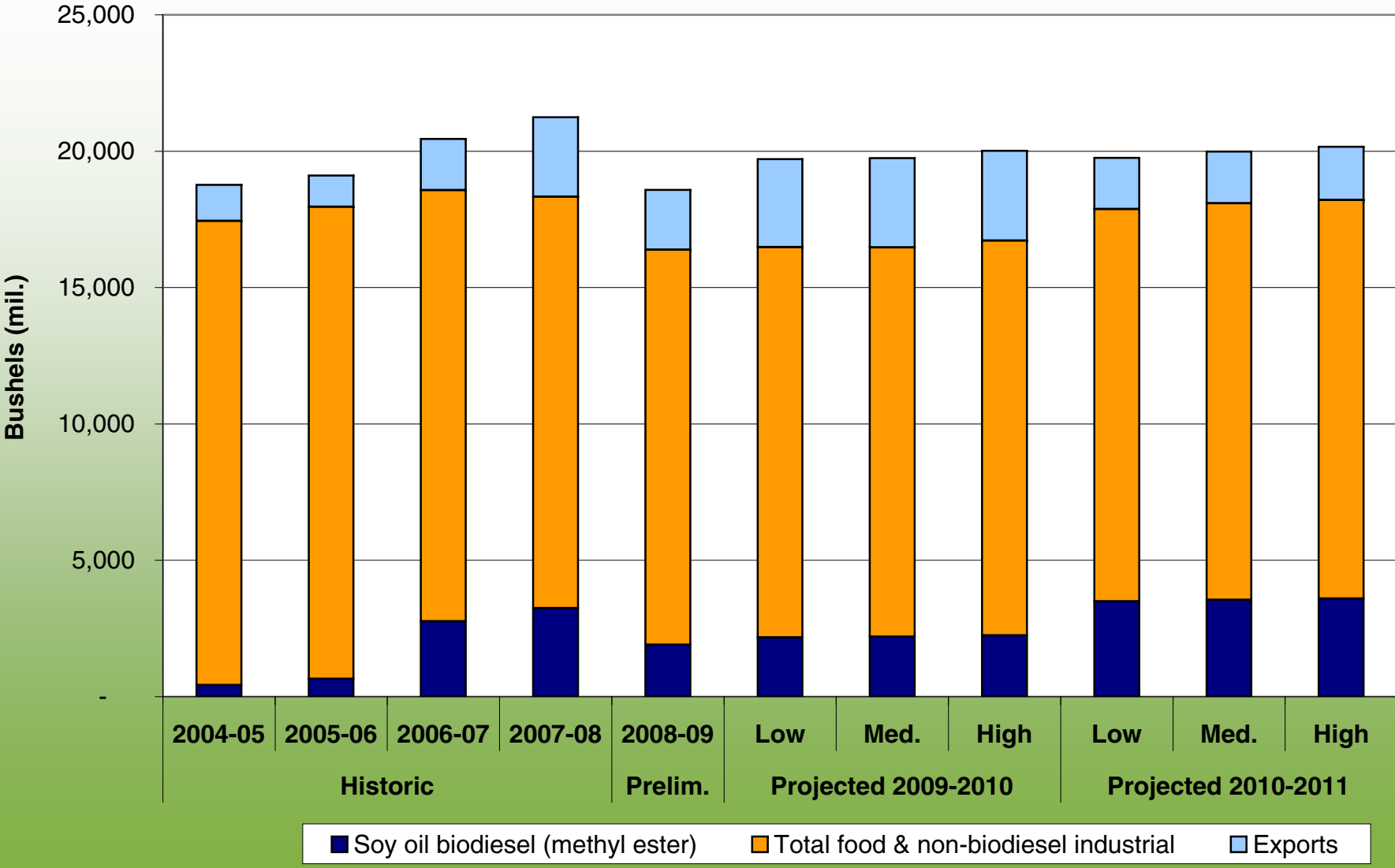
Soybean Oil Production, Usage, and Carryover



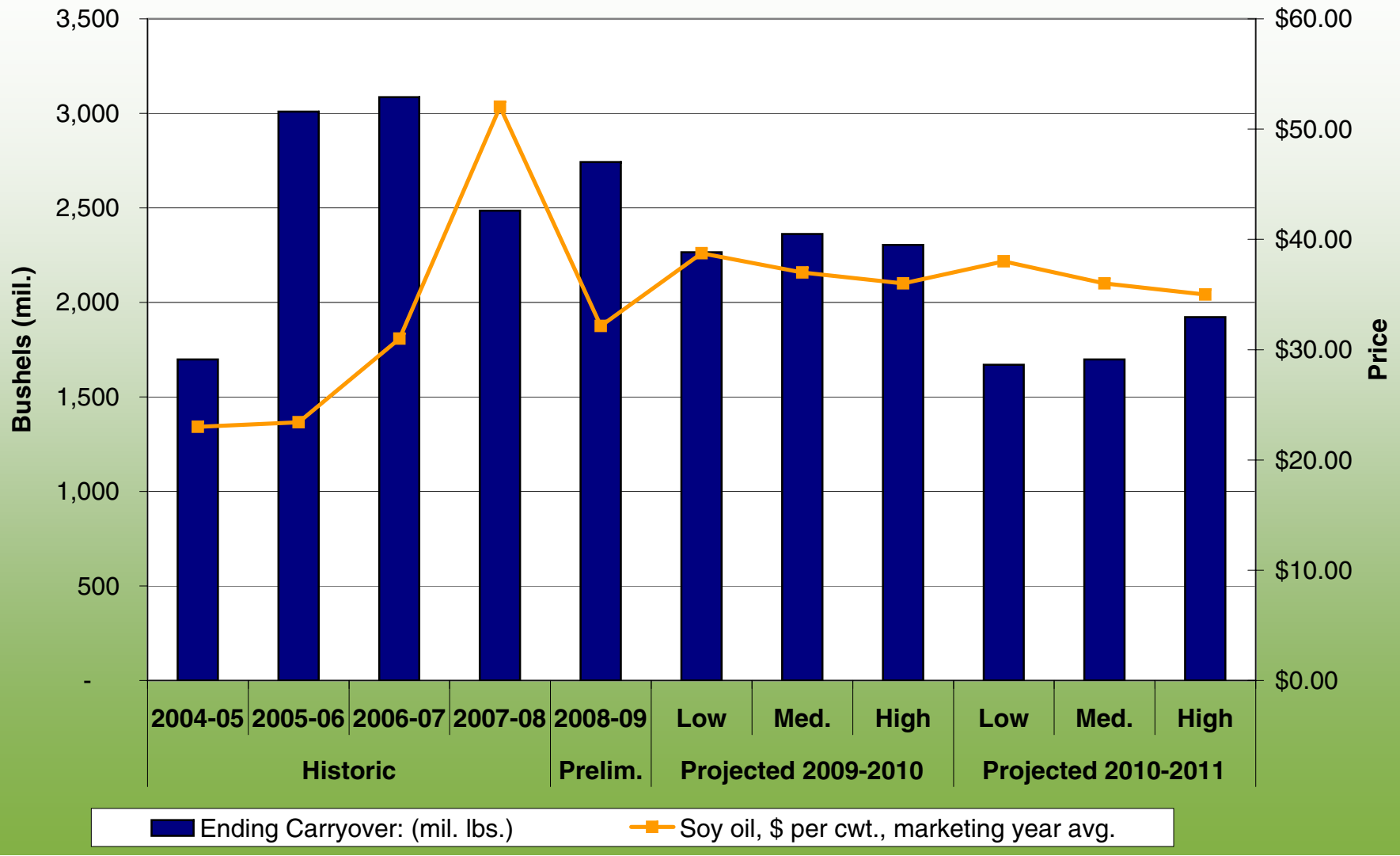
Yearly Production and Beginning Carryover for Soybean Oil



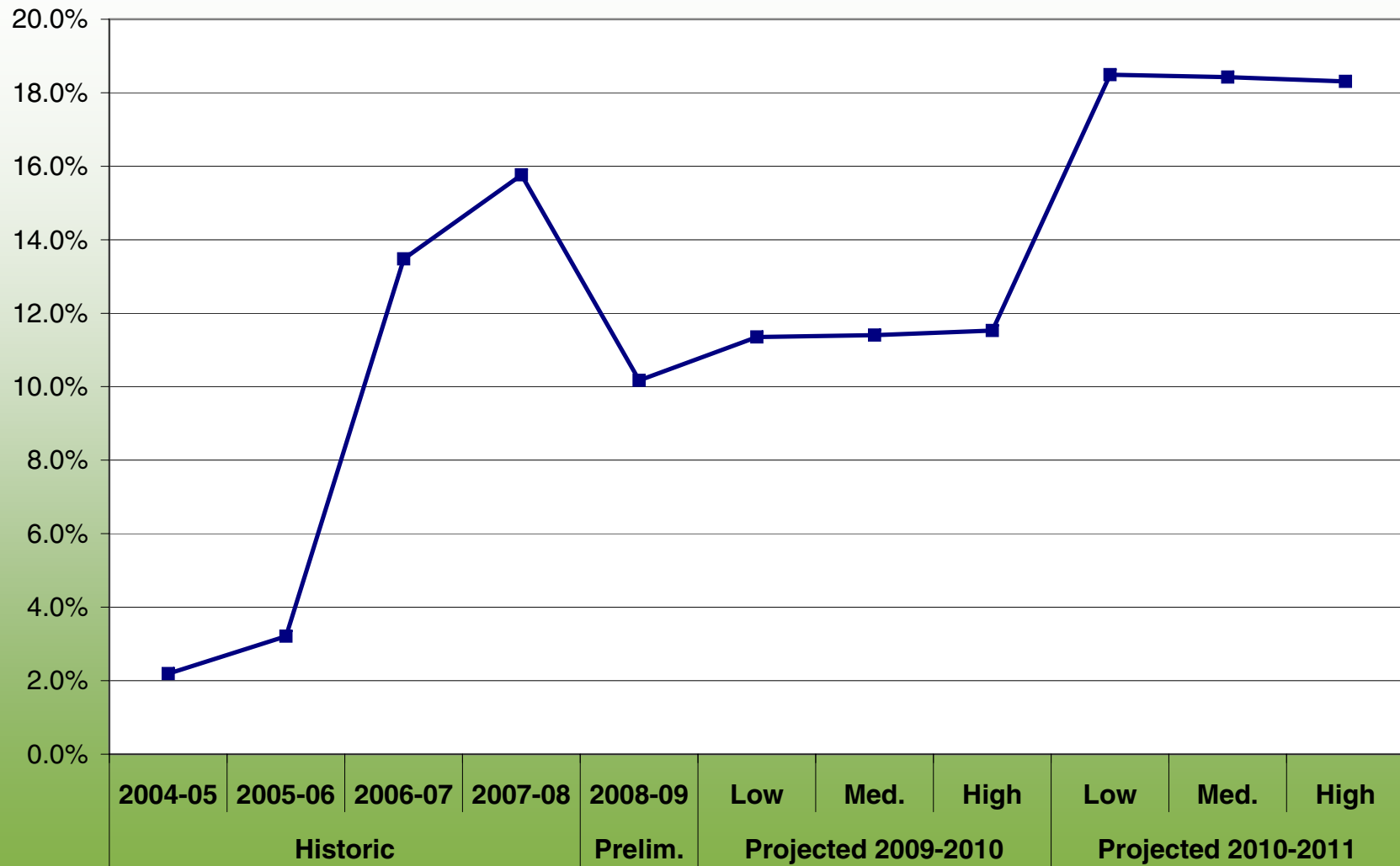
Usage of Soybean Oil and Biodiesel



Ending Soybean Oil Carryover and Price



Soybean Oil for Biodiesel, Percent of Crush



Mil. Lbs. Soybean Oil Requirements for Biodiesel in the December 2007 U.S. Energy Bill with 86% of Biodiesel Feedstock from Soy Oil

Mil. Bu. SB. Equivalent

