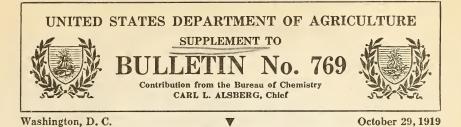
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THE PRODUCTION AND CONSERVATION OF FATS AND OILS IN THE UNITED STATES.

By HERBERT S. BAILEY, Chemist in Charge, Oil, Fat, and Wax Laboratory, in collaboration with B. E. REUTER, Chief, Fats and Oils Division, U. S. Food Administration.

Since Department of Agriculture Bulletin 769 was issued new statistics on the production, importation, and exportation of fats and oils in the United States have become available. The following tables, which contain the most recent figures on the fat and oil situation, have therefore been prepared to supersede the tables originally printed. They have been compiled from data collected by the Fats and Oils Division of the United States Food Administration, and turned over by that division to the United States Department of Agriculture. This publication completes the report of the fats and oils survey conducted by the Government during 1917 and 1918. Unless otherwise stated, all figures cover the calendar year.

Oil.	1912	1914	1916	1917	1918
Castor Coconut ¹ . Coquito Corn ² . Cottonseed ³ . Linseed Mustard seed. Olive Palm kernel ² . Peanut ² . Rajesseed. Sesame Shea nut Soy bean ² . Miscellaneous Total		$\begin{array}{c} Pounds,\\ 20,423,000\\ 38,272,000\\ 91,810,000\\ 1,789,777,000\\ 507,422,000\\ 306,000\\ 1,128,000\\ 402,000\\ 1,006,000\\ 435,000\\ 1,9000\\ 30,000\\ 2,764,000\\ 1,568,000\\ 2,455,362,000\\ 2,455,362,000\\ \end{array}$	$\begin{array}{c} Pounds,\\ 22,766,000\\ 104,727,000\\ 803,000\\ 109,963,000\\ 1,492,430,000\\ 531,556,900\\ 722,000\\ 1,462,000\\ 8,619,000\\ 28,534,000\\ 223,000\\ 129,000\\ 3,974,000\\ 3,974,000\\ 3,974,000\\ 2,249,000\\ 2,249,000\\ 2,318,866,000\\ \end{array}$	$\begin{array}{c} Pounds,\\ 22, 902, 000\\ 188, 488, 000\\ 1,343, 849, 000\\ 1, 343, 849, 000\\ 1, 343, 849, 000\\ 1, 98, 000\\ 6, 453, 000\\ 6, 453, 000\\ 667, 000\\ 032, 000\\ 304, 000\\ 81, 000\\ 42, 074, 000\\ 1, 268, 000\\ 2, 259, 098, 000\\ \end{array}$	$\begin{array}{c} Pounds.\\ 14, 184, 000\\ 341, 235, 000\\ \hline 111, 065, 000\\ 1, 283, 823, 000\\ 373, 452, 000\\ 1, 296, 000\\ 618, 000\\ 3, 784, 000\\ 95, 934, 000\\ 586, 000\\ 139, 000\\ 299, 000\\ \hline 79, 861, 000\\ 299, 000\\ \hline 2, 308, 685, 000\\ \hline \end{array}$

TABLE 1.—Production of vegetable oils in the United States.

¹ Figures represent total production of edible and inedible oil. As the edible oil is made from the inedible oil, there may be some duplication in these figures. ² Figures represent total production of edible and inedible oil.

^a Figures represent total production of crude oil only.

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TABLE 2.—Production of animal and fish fats and oils in the United States

Product.	1912	1914	1916	1917	1918
Bone grease	$\begin{array}{c} 372(000\\ 30,411,000\\ 1,888,000\\ 727,744,000\\ 51,414,000\\ 33,009,000\\ 5,151,000\\ 122,568,000\\ 4,083,000\\ 202,946,000\\ 331,000\\ 7,206,000\\ 1,980,000\\ 1,000,000\\ \end{array}$	$\begin{array}{r} Pounds.\\ 42, 264, 000\\ 394, 000\\ 44, 688, 000\\ 1, 512, 000\\ 887, 580, 000\\ 51, 333, 000\\ 16, 265, 000\\ 2, 495, 000\\ 227, 339, 000\\ 632, 000\\ 9, 370, 000\\ 9, 370, 000\\ 1, 433, 195, 000\\ 133, 195, 000\\ 1, 568, 245, 000\\ \end{array}$	$\begin{array}{r} Pounds,\\ 34,389,000\\ 367,000\\ 6,212,000\\ 1,476,000\\ 1,476,000\\ 1,086,581,000\\ 20,598,000\\ 7,239,000\\ 152,982,000\\ 4,560,000\\ 275,511,009\\ 1,691,000\\ 14,137,000\\ 14,931,000\\ 129,571,000\\ 1,870,057,000\\ \end{array}$	Pounds. 31,020,000 439,000 65,250,000 1,637,000 868,389,000 18,640,000 8,317,000 133,188,000 1,193,000 13,839,000 13,839,000 13,839,000 13,839,000 13,839,000 13,78,000 113,748,000 113,748,000	$\begin{array}{r} Pounds.\\ 24, 817, 000\\ 712, 000\\ 53, 476, 000\\ 53, 476, 000\\ 1, 008, 757, 000\\ 12, 370, 000\\ 9, 764, 000\\ 143, 929, 000\\ 743, 000\\ 304, 891, 000\\ 431, 000\\ 21, 020, 000\\ 7559, 000\\ 2554, 000\\ 165, 569, 000\\ 1, 838, 995, 000\\ \end{array}$

¹ Figures include edible and inedible product

TABLE 3.—Estimated production of fats and oils in the United States.¹

Product.	1912	1914	1916	1917	1918
Vegetable oils Animal fats and oils	Pounds. 2,031,481,000 1,315,539,000	Pounds. 2,455,362,000 1,568,245,000	<i>Pounds.</i> 2,318,866,000 1,870,057,000	Pounds. 2,259,098,000 1,605,727,000	Pounds. 2,308,685,000 1,838,995,000
Total	3,347,020,000	4,023,607,000	4,188,923,000	3,864,825,000	4,147,680,000
Butter fat (farm) ² Butter fat (factory)	1,660,000,090 581,000,000	1, 613, 736, 000 652, 382, 000	$879, 610, 000 \\ 630, 825, 000$	$\begin{array}{c} 733,222,000\\637,503,000 \end{array}$	777, 000, 000 669, 492, 000
Total	2,241,000,000	2,266,118,000	1,510,435,000	1,370,725,000	1,446,492,000
Grand total	5, 588, 020, 000	6,289,725,000	5,699,358,000	5,235,550,000	5, 594, 172, 000

¹ None of the derivatives reported in Table 11 are included here. ² The figures for farm butter fat are based on reports from various sources, and are believed by the authors to be at least 90 per cent correct.

TABLE 4.—Importation	of fats a	nd oils into	the United States. ¹
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Product.	1912	1914	1916	1917	1918
Vegetable: Chinese nut oil Coconut oil. Cottonseed oil. Linseed oil. Olive oil, dible Olive oil, inedible Olive oil, inedible Olive oil, inedible Olive foots Palm kernel oil Peanut oil. Rapeseed oil Soy bean oil Animal and fish: Cod and cod liver oil Oleo stearin. Tallow Miscellaneous greases. Miscellaneous oils	46,720,000 2,160,000 2,135,000 43,460,000 55,794,000 15,804,000 52,671,000 27,680,000 7,626,000 24,959,000 	Pounds. 30, 139, 000 58, 012, 000 6, 016, 000 4, 350, 000 56, 057, 000 56, 069, 000 49, 092, 000 21, 085, 000 14, 198, 000 44, 030, 000 12, 655, 000 14, 198, 000 11, 665, 000 10, 943, 900	$\begin{array}{c} Pounds.\\ 57, 649, 000\\ 64, 349, 000\\ 16, 599, 000\\ 711, 900\\ 54, 35, 000\\ 6, 335, 000\\ 14, 246, 000\\ 29, 270, 000\\ 4, 324, 900\\ 15, 674, 000\\ 20, 181, 900\\ 145, 409, 000\\ 145, 409, 000\\ 10, 973, 900\\ 649, 000\\ 13, 087, 900\\ 9, 580, 000\\ 23, 375, 900\\ 487, 845, 000\\ \end{array}$	$\begin{array}{c} Pounds.\\ 41, 190,000\\ 163,091,000\\ 13,826,000\\ 633,000\\ 51,055,000\\ 4,476,000\\ 8,308,000\\ 27,405,000\\ 27,405,000\\ 27,405,000\\ 264,926,000\\ 264,926,000\\ 265,555,000\\ 73,619,000\\ 23,4226,000\\ 75,252,068,000\\ \hline\end{array}$	1,284,000

¹ The figures in this table are taken from the Monthly Summary of Foreign Commerce of the United States, issued by the Bureau of Foreign and Domestic Commerce, of the United States Department of ² Reported as "All fish and animal oils."

Product.	1912	1914	1916	1917	1918
Vegetable: Chinese nut (tung) oil Coconut oil Cottonseed oil Linseed oil Oilve oil, edible. Oilve oil, edible. Oilve oil, edible. Oilve oil, edible. Oilve oil, edible. Oilve oil. Palm kernel oil. Palm kernel oil. Palm kernel oil. Stearin. Animal and fish: Fish oils (except whale) Lard. Lard Lard Stearin. Tallow. Miseellaneous greases. Miseellaneous oils. Lard compound. Oleomargarine.	$\begin{array}{c} 358,000\\ 22,870,000\\ 355,973,000\\ 3,51,000\\ 59,000\\ 71,000\\ 75,000\\ 7,000\\ 122,000\\ 7,000\\ 184,000\\ (2)\\ 9,375,000\\ 495,093,000\\ 495,093,000\\ 184,000\\ (2)\\ 9,375,556,000\\ 1,222,000\\ 1,224,000\\ 1,524,000\\ 1,524,000\\ 11,926,000\\ 11,026,000\\ 73,724,000\\ 3,500,000\\ \end{array}$	$\begin{array}{c} Pounds.\\ 106,000\\ 506,000\\ 16,199,000\\ 216,410,000\\ 1,995,000\\ 74,000\\ 952,000\\ 74,000\\ 96,000\\ 335,000\\ (2)\\ 1,340,000\\ 438,016,000\\ 21,798,000\\ 33,000\\ (2)\\ 1,340,000\\ 438,016,000\\ 21,798,000\\ 3,239,000\\ 3,300\\ (2,239,000\\ 3,300\\ 2,233,000\\ 2,2$	$\begin{array}{c} Pounds.\\ 132,000\\ 473,000\\ 9,119,000\\ 188,214,000\\ 6,180,000\\ 392,000\\ 79,000\\ 57,000\\ 57,000\\ 5,000\\ 1,71,000\\ 2,063,000\\ 1,411,000\\ 2,063,000\\ 1,411,000\\ 2,265,000\\ 2,679,000\\ 85,892,000\\ 13,217,000\\ 4,377,000\\ 4,377,000\\ 4,377,000\\ 6,309,000\\ \hline\end{array}$	$\begin{array}{c} Pounds.\\ 244,000\\ 1,830,000\\ 4,709,000\\ 124,730,000\\ 124,730,000\\ 124,730,000\\ 9,000\\ 31,000\\ 200\\ 000\\ 3,977,000\\ 1,262,000\\ 3,977,000\\ 1,262,000\\ 3,977,000\\ 1,852,000\\ 3,972,721,000\\ 9,423,000\\ 0,423,000\\ 3,400,000\\ 8,295,000\\ 3,40,000\\ 8,295,000\\ 3,40,000\\ 8,295,000\\ 3,40,000\\ 8,295,000\\ 3,40,000\\ 8,295,000\\ 3,40,000\\ 8,295,000\\ 3,500,000\\ 3,523,000\\ $	$\begin{array}{c} 10\\ 1,000\\ 75,000\\ 545,000\\ 1,020,000\\ 1,020,000\\ 4,281,000\\ 6,307,000\\ 69,106,000\\ 10,550,000\\ 10,550,000\\ 1,550,000\\ 4,223,000\\ 4,223,000\\ 4,233,000\\ 8,900,000\\ 8,909,000\\ 8,909,000\\ \end{array}$
Total	1, 159, 415, 000	866, 662, 000	838, 930, 000	638, 186, 000	831, 491, 000

TABLE 5.—Exportation of fats and oils from the United States.¹

¹ The figures in this table are taken from the Monthly Summary of Foreign Commerce of the United States, issued by the Bureau of Foreign and Domestic Commerce, of the United States Department of Commerce. ² Not reported as a separate item.

 TABLE 6.—Comparison of production with importation and exportation of fats and oils in 1918.1

Product.	Produced.	Imported.	Exported.
Vegetable: Chinese nut oil. Coconut oil. Corn oil. Cotronseed oil. Linseed oil. Dive oil. Palm oil. Soy bean oil. Stearin. Animal and fish: Cod and cod liver oil. Fish oil. miscellaneous. Lard., neutral. Lard. oil. Stearin. Tallow. Miscellaneous greases. Miscellaneous oils. Lard. Cato oil. Stearin. Tallow. Miscellaneous oils. Lard. Oleo oil. Stearin. Tallow. Miscellaneous oils. Lard. Oleo one. Cole one. C	$\begin{array}{r} 341,235,000\\111,065,000\\1,283,823,900\\0375,452,000\\0518,000\\\hline\hline\\3,784,000\\95,934,000\\0,139,000\\79,861,000\\9,996,000\\712,000\\712,000\\712,000\\14,088,000\\1,008,757,000\\81,289,000\\44,586,000\\95,433,000\\304,881,000\\304,881,000\\\hline\hline\end{array}$	51,885,000 29,711,000 20,984,000	

¹ This table includes only those items for which comparable figures are obtainable.

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	BULLETIN 109, U.	S. DEPARTMEN	T OF AGRICULTURE.
December.	Pounds. 9 327,000 9 327,000 16, 249,000 16, 249,000 7, 562,000 7, 562,000 166, 313,000 166, 313,000 1148, 819,000 31, 241,000 31, 241,000 112,000	6, 856, 000 6, 856, 000 8, 237, 000 115, 000 5, 524, 000 138, 000	$\begin{array}{c} 315,000\\ 3,000\\ 3,000\\ 114,346,000\\ 1,099,000\\ 1,889,000\\ 1,889,000\\ 1,589,000\\ 155,994,000\\ 155,994,000\\ 155,994,000\\ 1,019,000\\ 1,019,000\\ 1$
November.	Pounds. 5, 873,000 27, 505,000 2, 387,000 2, 387,000 2, 387,000 187,035,000 187,035,000 30, 977,000 94,000 9,000	$\begin{array}{c}3, 761, 000\\4, 651, 000\\90, 000\\750\\14, 125, 000\end{array}$	$\begin{array}{c} 96,000\\ 86,287,000\\ 345,000\\ 6,400,000\\ 1,004,000\\ 15,780,000\\ 1,583,000\\ 22,733,000\\ 23,733$
October.	$\begin{array}{c} Pounds,\\ 9, 483, 000\\ 9, 483, 000\\ 15, 074, 000\\ 5, 234, 000\\ 5, 232, 000\\ 5, 232, 000\\ 110, 970, 000\\ 1117, 475, 000\\ 33, 242, 000\\ 33, 242, 000\\ 11, 930, 000\\ 11, 900 \end{array}$	$\begin{array}{c} 1,423,000\\ 1,454,000\\ 70,000\\ 53,000\\ 6,726,000\\ 6,726,000\\ 6,726,000\\ 1155,000\end{array}$	$\begin{array}{c} 79,000\\ 106,000\\ 83,759,000\\ 83,269,000\\ 3,633,000\\ 3,633,000\\ 3,633,000\\ 3,633,000\\ 3,633,000\\ 16,831,000\\ 26,545,000\\ 26,545,000\\ 124,000\\ 124,000\\ \end{array}$
September.	$\begin{array}{c} Pounds,\\ 7,369,000\\ 15,114,000\\ 15,114,000\\ 2,679,000\\ 2,679,000\\ 20,534,000\\ 20,534,000\\ 20,239,000\\ 20,239,000\\ 20,239,000\\ 20,238,000\\ 20,23$	$\begin{smallmatrix} 5, 574, 000\\ 1, 490, 000\\ 97, 000\\ 8, 119, 000\\ 8, 119, 000\\ 8, 119, 000\\ 8, 122, 000\\ \end{smallmatrix}$	$\begin{array}{c} 31,000\\ 253,000\\ 53,077,000\\ 3,947,000\\ 3,947,000\\ 3,947,000\\ 3,947,000\\ 2,601,000\\ 2,601,000\\ 11,442,000\\ 19,784,000\\ 19,784,000\\ 19,784,000\\ 19,784,000\\ 19,784,000\\ 19,784,000\\ 10,784,000\\ $
August.	Pounds. 7, 232,000 7, 232,000 22, 178,000 2, 733,000 2, 793,000 113, 738,000 28,003,000 28,003,000 78,000	$\begin{array}{c} 594,000\\ 6,476,000\\ 1,301,000\\ 79,000\\ 7,000\\ 7,042,000\\ 7,042,000\\ 7,042,000\\ 68,000\end{array}$	$\begin{array}{c} 21,000\\ 228,000\\ (\dot{6}\dot{4},422,000\\ 396,000\\ 2,918,000\\ 2,864,000\\ 9,348,000\\ 9,348,000\\ 9,348,000\\ 17,684,000\\ 17,884,000\\ 17,884,000\\ 13,2000\\ 2,2000\\ 13,2000\\ 11,000\\ 101,000\\ 101,000\\ \end{array}$
July.	Pounds. 770,000 6,776,000 23,294,000 23,394,000 2,396,000 2,396,000 2,394,000 36,870,000 36,870,000 23,824,000 23,824,000	$\begin{array}{c} \begin{array}{c} 4.93,000\\ 4,194,000\\ 1,272,000\\ 49,000\\ 1,000\\ 8,663,000\\ 8,663,000\\ 8,663,000\\ 117,000\\ 12,000 \end{array}$	$\begin{array}{c} 30,000\\ 85,392,000\\ 85,392,000\\ 7,778,000\\ 1,108,000\\ 1,169,000\\ 1,593,000\\ 1,169,000\\ 1,169,000\\ 1,206$
June.	Pounds. 7,922,000 18,310,000 2,439,000 2,439,000 57,739,000 36,511,000	$\begin{array}{c} 2,374,000\\ 2,374,000\\ 715,000\\ 35,000\\ 10,000\\ 2,470,000\\ 2,470,000\\ 2,470,000\end{array}$	26,000 72,131,000 5,55,000 6,525,000 6,524,000 3,224,000 9,248,000 9,248,000 18,465,000 18,465,000 18,465,000 18,465,000 18,465,000
May.	<i>Pounds.</i> <i>Pounds.</i> 12, 754,000 21, 832,000 2, 782,000 5, 832,000 5, 832,000 60, 593,000 86, 920,000 86, 920,000 36, 1119,000 36, 1119,000 5, 000	$\begin{array}{c} 5,49,000\\ 5,993,000\\ 847,000\\ 14,000\\ 6,089,000\\ \end{array}$	$\begin{array}{c} 23,000\\ 20,000\\ 37,14,000\\ 6,551,000\\ 6,551,000\\ 6,551,000\\ 6,551,000\\ 10,544,000\\ 10,544,000\\ 10,546,000\\ 10,540,000\\ 18,540,000\\ 10,520\\ 10,500\\ $
April.	Perinds. Perinds. 205,000 5946,000 5,7558,000 5,7558,000 5,7558,000 101,100,000 131,376,000 333,975,000 333,975,000 333,976,000 333,000 333,000 333,000 333,000 333,000 333,000 333,000 333,000 333,000 333,000 333,000 345,0000 345,0000 345,0000 345,00000000000000000000000	6, 200,000 1, 196,000 37,000 4, 971,000	22,000 93,329,000 93,329,000 5,1146,000 5,1146,000 5,1146,000 5,1149,000 113,048,000 23,064,000 23,064,000 23,064,000 23,064,000 23,064,000 23,064,000 23,064,000 23,064,000 23,064,000 23,060 23,060 24,000 23,000 23,000 24,000 25,000 26,000 27,0000 27,000 27,000 27,0000 27,000 27,000 27,0000 27,0
March.	<i>Pownds.</i> 15, 059, 000 19, 329, 000 2, 749, 000 2, 749, 000 138, 618, 000 138, 518, 000 33, 562, 000 33, 562, 000 33, 562, 000 31, 000	$\begin{array}{c} 8,775,000\\ 8,775,000\\ 7225,000\\ 6,000\\ 6,000\\ 6,608,000\\ 69,000\\ 69,000\end{array}$	$\begin{array}{c} 14,000\\ 87,077\\ 000\\ 2,783,000\\ 9,783,000\\ 63,000\\ 63,000\\ 63,000\\ 12,121,000\\ 3,823,000\\ 21,682,000\\ 21,682,000\\ 21,682,000\\ 21,692,000\\ 21,00$
Fohruary.	Pounds. Pounds. 11, 327,000 15, 377,000 5, 230,000 154, 134,000 154, 134,000 154, 134,000 132,000 132,000 132,000 132,000	$\begin{array}{c} 5,973,000\\ 5,973,000\\ 1,507,000\\ -4,792,000\\ -4,792,000\\ 27,000\end{array}$	$\begin{array}{c} 8,000\\ 80,358,000\\ 2,898,000\\ 9,557,000\\ 9,557,000\\ 9,416,000\\ 18,663,000\\ 18,663,000\\ 18,663,000\\ 18,663,000\\ 64,000\\ 64,000\\ \end{array}$
January.	$\begin{array}{c} Pounds.\\ Pounds.\\ 6,840,000\\ 6,840,000\\ 15,401,000\\ 1,5519,000\\ 1,950,000\\ 1,960,000\\ 1,960,000\\ 230,687,000\\ 230,084,000\\ 275,000\\ 560,000\\ 560,000\\ \end{array}$	$\begin{array}{c} 12,905,000\\ 2,035,000\\ 2,035,000\\ 3,789,000\\ 3,789,000\\ 8,000\\ \end{array}$	$\begin{array}{c} 47,000\\ 11,000\\ 22,710,000\\ 5,019,000\\ 5,019,000\\ 746,000\\ 10,923,000\\ 10,923,000\\ 10,427,000\\ 19,427,000\\ \end{array}$
Products.	VEGETABLE OILS. Castor 1. Coconut, puchile. Coconut, incuible. Corn, incelible. Corn, incelible. Corn, incelible. Cornosced, rende. Cottonseed, rende. Linseed.	Paim kerner, incluible Peanut, outble. Peanut, incluible. Rajsin sood. Rajsesud Soy bean, outble 2 Soy bean, incluible. Miseellaneous. ANIXAL FATS AND OILS.	Cod and cod liver oil. Herring ol Lard, edible. Lard, edible. Lard, inedible. Lard, inedible. Lard, inedible. Lard, inedible. Menhaden oil. Neas for oil and stock. Neas for oil and stock. Neas for oil and stock. Tallow, edible t Tallow, inedible t Tallow, inedible t Miseellaneous fish oils t

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1,148,000 2,048,000	3,573,000 60,000	$ \begin{array}{c} 6,172,000\\ 5,982,000\\ 1,526\\ 000 \end{array} $	4,746,000 $485,000$		4, 336, 000 2, 200, 000		15,751,000 $2,206,000$	5,543,000 4,673,000	5,994,000	4, 739, 000	62,000	11,264,000 296.000	3,471,000	8, 176, 000	259,000	350.000	1, 498, 000	1,239,000	
959,000 1 389,000	3, 710,000 61,000	4,406,000	$ \begin{array}{c} 1,050,000\\ 3,373,000\\ 2,541,000 \end{array} $		3,350,000 1.327.000		11,625,000 3,467,000	6, 253, 000 3, 795, 000	6, 531, 000	4,210,000	21,000	11, 9/2,000	3, 389, 000	7,624,000	549,000	31,000	1, 176, 000	1, 384, 000	es.
1,605,000	38,000 3,456,000 64,000	4, 285,000	1, 100, 000 3, 240, 000 855, 000		1,178,000 1.626,000		8, 216, 000 3, 035, 000	3, 533, 000	4, 585, 000	4,653,000	62,000	13,112,000 248,000	3, 286, 000	8,412,000	220,000	27,000	763,000	1, 128, 000	United Stat
1,800,000 1,448,000	4, 399, 000	3, 976, 000	2, 034, 000 2, 329, 000 1, 106, 000		1,599,000 3,671,000		3,677,000 1,038,000	6, 545, 000	3, 224, 000	3,987,000	52,000	10,864,000	2,604,000	6,062,000	533,000	69,000 1 335 000	941,000	566, UUU	² This is largely imported crude oil which has merely been refined in the United States.
2, 336, 000 1, 407, 000	4,286,000	4, 131,000	2, 083, 000 2, 465, 000 474, 000		1,049,000 3.088,000	153,000	2,388,000 2,132,000	6,074,000	2, 690, 000	4,434,000	24,000	8, 932,000	2,280,000	4,862,000	1,084,000	93,000	793,000	196,000	rely been re
2,003,000 1,403,000	4,584,000	4, 598,000	4,027,000		2, 147,000		$\frac{4}{2},077,000$ 2,278,000	6, 567, 000	2, 290, 000	4, 242, 000	19,000	10, 297,000	3, 272,000	6,809,000	1,350,000	73,000	1, 593,000	322,000	hich has me
1,808,000	4,923,000	4, 339,000	2,578,000 1,427,000		1,867,000 2.029,000	168,000	7,255,000 2,277,000	6,471,000	6, 818, 000	2,203,000	6,000	12,256,000 3,000	3,521,000	6, 216, 000	427,000	1 164 000	985,000	191,000	l crude oil w
2, 260, 000 1, 383, 000	5,902,000	4, 576,000	$ \begin{array}{c} 1, 999, 000 \\ 2, 507, 000 \\ 1, 286, 000 \end{array} $		3,445,000	212,000	9,307,000 4,424,000	6, 795, 000	3, 499,000	2,483,000	16,000	13, 202, 000	4, 166, 000	4, 588,000	5,259,000	116,	1, 280, 000	66,000	oly imported
2,347,000	4, 909, 000	5, 843, 000 4, 281, 000	1, 972, 000 3, 197, 000 726, 000		3,975,000 2,621,000	384,000	12,517,000 5,140,000	6, 768, 000	2, 752,000	1, 756, 000	25,000	17,285,000 $45,000$	4,233,000	2, 434, 000 9, 556, 000	1,003,000	130,000	1,676,000	210,000	This is large
2,520,000 1,071,000	5, 197, 000 30, 000	5,728,000 $4,026,000$	2,545,000 1,871,000		3,605,000 1,668,000		13, 294, 000 4, 824, 000	227	559,	685,	28,	12, 774, 000	3, 828,000	6,767,000	1, 389, 000	94,000 202 000	837,000	2,797,000	
3, 106,000	4,630,000	8, 779, 000 1, 559, 000	559, 559, 349,		3,435,000 1,368,000		11,078,000 $3.582,000$	5,805,000	2,830,000	2, 935, 000	25,000	11,442,000	2,709,000	5,900,000	602,000	517,000	206,000	154,000	θ.
2,925,000	3, 907, 000	$^{8,011,000}_{406,000}$	L, 589,000 550,000 103,000		3,671,000		14,407,000 $3,536,000$	2,531,000	2, 200, UUU	5,259,000	ရိုက်	12,888,000	1, 691, 000	7, 195, 000	600,000	57 000	30,000	319,000	¹ Figures incomplete.
GREASES. Bone.	Curriers' Garbage Sawor	Tankage White	w ool and recovered Yellow. Miscellaneous.	DERIVATIVES.	Acidulated soap stock	Coconut olein, refined	Cottonseed foots	Fatty acids.	Hydrogenated fat and oil	Lard oil.	Mutton oil	Oleo oil, edible.	Red oil	Tallow and oleo stearin, edible	Tallow and oleo stearin, in- edible	Tallow oil.	Miscellaneous foots.	MISCEllaneous soap stock	¹ Figure

1918
Pounds. 1,015,051,000
13,408,000 2,288,000 27,912,000
56, 517, 000 14, 904, 000
6,350,000 1,850,000
54,598,000 11,361,000
18,172,000 1,222,413,000 1,146,236,000
1,:

TABLE 8.—Consumption of fats and oils by the lard substitute industry.

¹ These figures do not represent the total amount of hydrogenated oil used in the manufacture of lard substitutes, for the reason that in many instances manufacturers who do their own hydrogenating reported the amounts of oils thus treated, rather than the amounts of the hardened product. The figures here given represent largely the amount of hydrogenated oil purchased by the smaller substitute makers for combining with the other ingredients.

² The discrepancy between the amount of the total substitutes reported and that of the ingredients used is probably due to the fact that some manufacturers included in their reports the weight of the crude oil instead of the refined oil.

TABLE 9.—Consum	ption of	f fats and	oils by t	he soap industry.
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Products consumed.	1912	1914	1916	1917
Vegetable:	Pounds.	Pounds.	Pounds.	Pounds.
Chinese vegetable tallow	2,013,000	3,485,000	5,273,000	6,417,000
Chinese nut oil Coconut oil	78,816,000	77,959,000	118,000 111,084,000	115,000 168,602,000
Corn oil	9,822,000	11,368,000	12,821,000	15,997,000
Cottonseed oil.	132, 312, 000	119,254,000	194,916,000	126, 390, 000
Linseed oil	1,390,000	1,034,000	803,000	1,006,000
Olive oil	690,000	748,000	1,184,000	1,731,000
Palm oil Palm kernel oil	7,546,000	71,896,000 31,376,000	14,938,000 5,804,000	27,345,000
Palm Kernel oll.	20,579,000 31,000	76,000	1,181,000	4,762,000 15,126,000
Rapeseed oil.	6, 532, 000	6,664,000	7, 224, 000	5,972,000
Sesame oil	1,110,000	11,000	8,000	5,000
Shea nut oil			1,058,000	2,487,000
Soy bean oil	1,182,000	4,499,000	57, 373, 000	124,058,000
Miscellaneous oils	9,097,000	6,637,000	7,020,000	9,692,000
Total	271, 120, 000	335,007,000	420, 805, 000	509,705,000
Animal and fish:				
Bone grease	17, 526, 000	16,832,000	19,535,000	37,032,000
Garbage grease	12,619,000 56,000	13,627,000 10,339,000	28,719,000 2,705,000	63,118,000 4,104,000
Herring ŏil Lard.	8,469,000	10, 484, 000	8,294,000	7,481,000
Menhaden oil	116,000	882,000	330,000	2,279,000
Neats foot oil and stock	29,000	77,000	329,000	118,000
Recovered grease	2,858,000	10,627,000	8, 531, 000	12,680,000
Sperm oil.	9,000	7,000	14,000	17,000
Tallow.	238,685,000 28,566,000	270,713,000 31,822,000	338,931,000 35,769,000	362, 297, 000 38, 303, 000
Tankage grease Whale oil	9,927,000	4,023,000	8,126,000	5,732,000
Miscellaneous oils	4,639,000	10,909,000	11, 130, 000	9,490,000
Total	323, 499, 000	380, 342, 000	462, 413, 000	542,651,000
Derivatives:1				
Acidulated soap stock	20, 135, 000	32,075,000	20, 473, 000	25,086,000
Cottonseed foots Cottonseed foots (distilled)	77,975,000	88,667,000	103, 868, 000	107,070,000
Cottonseed foots (distilled)	11, 152, 000	19,474,000	8,410,000	8,872,000
Fatty acids.	16,735,000	20, 896, 000	33,720,000	35,050,000
Fatty acids Fatty acids (distilled) Grease stearin.	12,765,000 1,461,000	14,946,000 944,000	28,195,000 5,144,000	39,465,000 19,146,000
Lard oil.	1, 134, 000	1, 265, 000	2,143,000	2,148,000
Olive oil foots	5,457,000	7,298,000	9,411,000	10, 500, 000
Red oil Miscellaneous soap stock	8,723,000	10,275,000	10,230,000	12, 812, 000
	25,000,000	25,000,000	25,000,000	25,000,000
Total	180, 537, 000	220, 840, 000	246, 594, 000	285, 149, 000
Grand total	775, 156, 000	936, 189, 000	1, 129, 812, 000	1,337,505,000

¹ The fact that no reports for hydrogenated oil are included in this table does not mean that none is used in the soap industry. Large amounts of hydrogenated oil were substituted for tallow and other hard fats, which were abnormally high during the recent great war. The soap makers using hydrogenated oil, however, are largely producers of their own hardened fats, and have reported the oils hardened rather than the hydrogenated product.

Products consumed.	1912	1914	1916	1917	1918
Vegetable: Coconut oil Corn oil. Cottonseed oil. Mustard seed oil. Peanut oil. Soy bean oil.	$17,837,000 \\ 197,000 \\ 2,453,000 \\ 708,000$	Pounds. 112,000 21,205,000 373,000 3,137,000 486,000	Pounds. 563,000 147,000 49,960,000 169,000 5,335,000 2,123,000	Pounds. 19, 763, 000 859, 000 63, 652, 000 46, 000 10, 498, 000 6, 614, 000	$\begin{array}{c} Pounds. \\ 61,773,000 \\ 60,000 \\ 36,454,000 \\ 158,000 \\ 21,593,000 \\ 5,921,000 \end{array}$
Vegetable stearin Miscellaneous oils. Animal: Butter. Lard and neutral lard Mutton oil. Oleo oil. Oleo stearin Oleo stock Tallow.	645,000	600,000 19,439,000 46,445,000 2,620,000 161,000 329,000	$\begin{array}{c} 2, 152, 000\\ 33, 446, 000\\ 68, 989, 000\\ 2, 036, 000\\ 397, 000 \end{array}$	$\begin{array}{c} \textbf{3, 303, 000} \\ \textbf{42, 401, 000} \\ \textbf{149, 000} \\ \textbf{96, 652, 000} \\ \textbf{2, 494, 000} \\ \textbf{3, 458, 000} \\ \textbf{77, 000} \end{array}$	$\begin{array}{r} 42,000\\ 124,000\\ 4,548,000\\ 45,702,000\\ 14,000\\ 96,378,000\\ 3,427,000\\ 7,526,000\\ 982,000\end{array}$
Hydrogenated oil	66, 086, 000	94,907,000	165, 317, 000	249,966,000	66,000 284,768,000
Other ingredients: Milk. Salt. Oleomargarine produced ¹	11, 856, 000 2, 096, 000 95, 397, 000	$12,799,000 \\ 2,537,000 \\ 123,843,000$	21, 331, 000 4, 088, 000 184, 889, 000	24, 410, 000 6, 115, 000 271, 874, 000	61, 128, 000 18, 279, 000 332, 898, 000

TABLE 10.—Consumption of fats and oils by the oleomargarine industry.

¹ The manufacture of the so-called nut margarines has increased greatly during the past few years. The makers of this product used a large amount of dried milk, and in some cases they have reported the weight of the dried milk instead of its equivalent in whole milk. It must also be remembered that when ready for the market oleomargarine contains from 14 to 16 per cent of water, introduced as such or with the milk and salt which are among the ingredients of this product. This in part accounts for the discrepancy between the amount of oleomargarine reported and the amount of ingredients entering into its composition.

TABLE 11.—Production of fat and oil derivatives in the United States.

Product.	1912	1914	1916	1917	1918
Acidulated soap stock Animal stearin . Coconut olein.	17,726,000	Pounds. 33,025,000 20,075,000	Pounds. 26, 199, 000 31, 811, 000	Pounds. 16, 151, 000 31, 607, 000	Pounds. 33, 657, 000 25, 674, 000 917, 000
Cottonseed foots. Cottonseed foots (distilled). Fatty acids. Fatty acids (distilled). Lard oil.	142, 812, 000 79, 342, 000 15, 618, 000 28, 476, 000 19, 812, 000	195, 461, 000 86, 910, 000 23, 463, 000 32, 436, 000 22, 034, 000	$\begin{array}{c} 123,326,000\\ 32,786,000\\ 20,431,000\\ 50,016,000\\ 45,413,000\end{array}$	$\begin{array}{c} 112,847,000\\ 33,900,000\\ 25,446,000\\ 55,373,000\\ 37,931,000\end{array}$	$\begin{array}{c} 113, 592, 000 \\ 37, 939, 000 \\ 69, 112, 000 \\ 46, 919, 000 \\ 44, 586, 000 \end{array}$
Lard stearin. Mutton oil. Oleo oil. Red oil. Stearic acid. Tallow and oleo stearin.	573,000 118,939,000 27,494,000 3,773,000	$\begin{array}{r} 687,000\\ 142,367,000\\ 38,109,000\\ 6,176,000\end{array}$	3,000 430,000 150,794,000 38,300,000 10,311,000 70,928,000	4,000 405,000 142,559,000 40,160,000 6,351,000 82,025,000	6, 177, 000 348, 000 147, 866, 000 38, 450, 000 18, 571, 000 95, 442, 000
Tailow and one stearin. Tailow oil. Vegetable stearin. Miscellaneous foots Miscellaneous soap stocks	5, 010, 000 385, 000	$\begin{array}{r} 80,735,000\\ 8,103,000\\ \hline 1,258,000\\ 18,095,000 \end{array}$	$\begin{array}{c} 79,828,000\\ 6,702,000\\ 5,398,000\\ 2,210,000\\ 11,629,000 \end{array}$	83,025,000 3,761,000 5,801,000 2,417,000 7,457,000	$\begin{array}{c} 95,442,000\\ 1,239,000\\ 9,096,000\\ 11,778,000\\ 9,168,000 \end{array}$
Total	580, 228, 000	708, 934, 378	635, 587, 000	605, 195, 000	710, 531, 000

