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Table 21--Farm value of processed farm commodities purchased by various industries, 1987 1/

Sector	Industry				
	Construction	Clothing	Paper and printing	Chemical	Durable goods
	Million Dollars				
Livestock 2/		274.80		100.90	1.80
Cotton		3,256.10			
Field crops 3/	100.00				
Other crops 4/	140.50			113.60	20.00
Meat processor 5/		546.88		29.70	78.63
Livestock		546.72		29.69	78.61
Field crops		0.16		0.01	0.02
Other crops				6/	6/
Prepared feed				0.92	
Livestock				0.04	
Cotton				0.03	
Field crops				0.86	
Other crops				0.01	
Corn milling			138.43	68.00	6.70
Field crops			138.03	67.81	6.70
Other crops			0.39	0.19	
Distilled liquor 7/		0.19	0.38	0.23	1.75
Livestock			6/		0.01
Field crops		0.19	0.38	0.23	1.74
Other crops			6/		6/
Cottonseed oil			24.35	3.30	7.63
Cotton			24.35	3.30	7.63
Soy milling				95.66	
Field crops				94.92	
Other crops				0.73	
Other vegetable oil				67.45	1.21
Cotton				21.12	0.38
Field crops				46.33	0.83
Other crops				6/	6/
Animal fats		0.24		7.95	
Livestock		0.24		7.95	
Field crops				6/	
Shortening, table oil, and margarine				72.08	
Livestock				5.74	
Cotton				4.64	
Field crops				61.28	
Other crops				0.42	
Other processed foods				1.76	0.08
Livestock				0.01	6/
Cotton				1.71	0.08
Field crops				0.04	6/

1/ The farm value is reported by commodity and processing sector for various industries purchasing processed agricultural commodities. Totals may not add due to rounding. 2/ Dairy, poultry, and meat animals. 3/ Food grains, feed grains, tobacco, fruit, tree nuts, vegetables, sugar, and oilseed crops. 4/ Miscellaneous crops and greenhouse and nursery products. 5/ Meat packing plants, sausages, and poultry. 6/ Less than \$10,000. 7/ Excluding wine and beer.

Sources: Kenneth Hanson, ERS; Benchmark Input-Output Accounts of the United States, 1987, Department of Commerce, Bureau of Economic Analysis, November 1994; and Survey of Current Business, Vol. 5, No. 4, April 1994.

Table 22--Flaxseed: Acreage planted, harvested, yield, production, and value, United States, 1986-95

Year	Planted	Harvested	Yield	Production	Value
			Bushels per acre	1,000 bushels	\$1,000
	—1,000 acres—				
1986	720	683	16.9	11,538	39,962
1987	470	463	16.1	7,444	25,188
1988	275	226	7.1	1,615	12,200
1989	195	163	7.5	1,215	8,724
1990	260	253	15.1	3,812	21,108
1991	356	342	18.1	6,200	21,845
1992	171	165	19.9	3,288	13,543
1993	206	191	18.2	3,480	14,467
1994 1/	178	171	17.1	2,922	13,655
1995 2/	213	206	18.0	3,710	N.A.

N.A. = Not available.

1/ Preliminary. 2/ Forecast.

Table 23--Linseed oil, supply and disappearance, United States, 1986/87-1995/96

Year	Supply			Disappearance			Ending stocks
beginning June 1	Beginning stocks	Production	Total	Exports	Domestic	Total	
	—Million pounds—						
1986/87	39	201	240	6	183	189	51
1987/88	51	217	268	8	219	227	41
1988/89	41	170	211	12	151	163	48
1989/90	48	165	213	12	164	176	37
1990/91	37	176	213	6	167	173	40
1991/92	40	182	222	12	170	182	40
1992/93	40	172	212	8	150	158	54
1993/94	54	176	228	3	162	165	63
1994/95 1/	63	171	237	24	168	192	45
1995/96 2/	45	177	223	8	170	178	45

1/ Preliminary. 2/ Forecast.

Table 24--Linseed meal, supply and disappearance, United States, 1986/87-1995/96

Year	Supply				Disappearance			Ending stocks
beginning June 1	Beginning stocks	Production	Imports	Total	Exports	Domestic	Total	
	—1,000 short tons—							
1986/87	5	185	2	192	63	127	190	2
1987/88	2	198	2	202	59	140	199	3
1988/89	3	156	11	170	63	102	165	5
1989/90	5	153	9	167	23	139	162	5
1990/91	5	162	3	170	41	124	165	5
1991/92	5	167	0	172	40	127	167	5
1992/93	5	159	2	166	55	106	161	5
1993/94	5	160	2	167	49	113	162	5
1994/95 1/	5	158	5	168	58	105	163	5
1995/96 2/	5	162	3	170	50	115	165	5

1/ Preliminary. 2/ Forecast.

Table 25--Rapeseed: Acreage planted, harvested, yield, production, and value, United States, 1987-94

Year	Planted	Harvested	Yield	Production	Value
			Bushels per acre	1,000 bushels	\$1,000
	—1,000 acres—				
1987	20.0	19.4	22.7	21,981	N.A.
1988	13.5	13.1	24.1	15,822	N.A.
1989	14.0	13.6	28.2	19,143	2.01
1990	15.0	14.5	31.2	22,717	2.33
1991	18.2	15.6	20.7	16,146	1.63
1992	9.6	7.7	24.5	9,408	0.09
1993 1/	15.0	12.0	24.6	14,760	1.31
1994 2/	16.0	12.8	24.7	15,808	1.40

N.A. = Not available.

1/ Preliminary. 2/ Forecast.

Table 26--Total fats and oils consumption, with inedible by category, United States, 1987/88-94

Year 1/	Total consumption	Total edible	Total inedible	Soap	Paint or varnish	Feed	Resins and plastics	Lubricants 2/	Fatty acids	Other products
--Million pounds--										
1987/88	20,241.2	14,175.5	6,065.7	868.6	179.1	1,967.6	196.3	107.8	2,203.8	542.8
1988/89	19,426.7	13,542.0	5,884.7	744.5	180.3	2,079.3	202.3	115.8	2,074.1	488.4
1989/90	20,036.0	14,382.7	5,653.3	792.0	89.5	2,143.5	222.4	157.1	1,944.7	304.1
1991	20,332.1	14,613.0	5,719.1	832.9	106.8	1,974.0	182.6	101.7	2,234.7	286.4
1992	20,751.7	14,847.3	5,904.4	738.8	123.8	2,176.5	165.5	109.4	2,041.2	549.3
1993	21,590.4	15,744.7	5,845.7	748.5	125.2	2,199.5	170.2	116.0	1,897.6	588.7
1994	22,058.7	15,373.8	6,684.9	770.0	1,151.1	2,272.5	240.7	219.3	2,306.2	761.1

1/ Crop year runs from October 1 to September 30. Annual totals reported on a calendar year basis beginning in 1991. 2/ Includes similar oils.

Source: Department of Commerce, Bureau of the Census.

Table 27--Castor oil consumption, with inedible by category, United States, 1987/88-94

Year 1/	Total consumption	Total edible	Total inedible	Soap	Paint or varnish	Feed	Resins and plastics	Lubricants 2/	Fatty acids	Other products
--Million pounds--										
1987/88	74.6	0.0	74.6	d	4.3	0.0	4.8	6.1	d	59.0
1988/89	59.2	0.0	59.2	d	4.8	0.0	4.5	6.2	0.0	43.2
1989/90	51.4	0.0	51.4	d	5.9	0.0	4.0	5.7	0.0	d
1991	46.0	0.0	46.0	d	5.9	0.0	4.0	d	0.0	31.7
1992	41.3	0.0	41.3	d	d	0.0	3.3	3.5	0.0	28.4
1993	54.2	0.0	54.2	d	d	0.0	3.5	2.8	0.0	37.8
1994	61.9	0.0	61.9	d	d	0.0	1.9	2.4	0.0	41.0

d = Data withheld to avoid disclosing figures for individual companies.

1/ Crop year runs from October 1 to September 30. Annual totals reported on a calendar year basis beginning in 1991. 2/ Includes similar oils.

Source: Department of Commerce, Bureau of the Census.

Table 28--Coconut oil consumption, with inedible by category, United States, 1987/88-94

Year 1/	Total consumption	Total edible	Total inedible	Soap	Paint or varnish	Feed	Resins and plastics	Lubricants 2/	Fatty acids	Other products
--Million pounds--										
1987/88	788.6	233.4	555.4	213.8	d	0.0	7.2	d	131.4	d
1988/89	688.8	211.2	477.6	130.6	1.4	d	14.6	d	121.9	206.6
1989/90	525.2	160.6	364.6	156.9	2.1	0.0	9.7	4.0	134.6	57.3
1991	815.6	153.0	662.6	158.0	d	d	2.4	d	426.7	72.8
1992	875.4	176.3	699.1	121.7	d	0.0	3.2	d	d	d
1993	936.3	218.0	718.3	132.0	d	0.0	3.1	d	d	d
1994	969.2	227.1	742.1	146.1	d	0.0	2.3	d	d	d

d = Data withheld to avoid disclosing figures for individual companies.

1/ Crop year runs from October 1 to September 30. Annual totals reported on a calendar year basis beginning in 1991. 2/ Includes similar oils.

Source: Department of Commerce, Bureau of the Census.

Table 29--Inedible tallow consumption, with inedible by category, United States, 1987/88-94

Year 1/	Total consumption	Total edible	Total inedible	Soap	Paint or varnish	Feed	Resins and plastics	Lubricants 2/	Fatty acids	Other products
--Million pounds--										
1987/88	3,137.8	0.0	3,137.8	502.0	0.0	1,820.3	0.0	69.9	712.6	33.0
1988/89	3,086.7	0.0	3,086.7	374.9	0.0	1,925.4	0.0	70.3	680.0	36.1
1989/90	3,219.0	0.0	3,219.0	398.4	0.0	1,982.9	0.0	109.0	684.0	44.7
1991	2,949.3	0.0	2,949.3	391.5	0.0	1,748.4	0.0	59.6	700.9	48.9
1992	3,050.1	0.0	3,050.1	334.4	0.0	1,954.4	0.0	63.2	659.0	39.1
1993	3,018.2	0.0	3,018.2	299.6	0.0	1,994.7	0.0	71.5	615.1	37.3
1994	3,189.9	0.0	3,189.9	300.8	0.0	2,101.9	0.0	81.8	634.0	71.4

1/ Crop year runs from October 1 to September 30. Annual totals reported on a calendar year basis beginning in 1991. 2/ Includes similar oils.

Source: Department of Commerce, Bureau of the Census.

Table 30--Linseed oil consumption, with inedible by category, United States, 1987/88-94

Year 1/	Total consumption	Total edible	Total inedible	Soap	Paint or varnish	Feed	Resins and plastics	Lubricants 2/	Fatty acids	Other products
--Million pounds--										
1987/88	159.3	0.0	159.3	0.0	85.5	0.0	31.0	d	d	40.5
1988/89	154.9	0.0	154.9	0.0	101.6	0.0	23.1	d	d	28.2
1989/90	110.5	0.0	110.5	0.0	30.3	d	52.5	d	d	23.8
1991	95.8	0.0	95.8	0.0	40.7	0.0	41.6	d	d	12.7
1992	154.4	0.0	154.4	0.0	69.0	0.0	31.3	d	d	d
1993	125.8	0.0	125.8	0.0	66.9	0.0	25.4	d	d	d
1994	124.3	0.0	124.3	0.0	33.0	0.0	50.9	d	d	40.4

d = Data withheld to avoid disclosing figures for individual companies.

1/ Crop year runs from October 1 to September 30. Annual totals reported on a calendar year basis beginning in 1991. 2/ Includes similar oils.

Source: Department of Commerce, Bureau of the Census.

Table 31--Rapeseed oil consumption, with inedible by category, United States, 1989/90-94 1/

Year 2/	Total consumption	Total edible	Total inedible	Soap	Paint or varnish	Feed	Resins and plastics	Lubricants 3/	Fatty acids	Other products
--Million pounds--										
1989/90	d	265.0	d	0.0	d	d	d	d	d	d
1991	d	285.1	d	0.0	0.0	d	0.0	d	d	d
1992	d	360.5	d	0.0	0.0	d	0.0	d	d	d
1993	d	362.5	d	0.0	0.0	0.0	0.0	d	d	d
1994	d	446.3	d	0.0	0.0	0.0	0.0	d	d	d

d = Data withheld to avoid disclosing figures for individual companies.

1/ Includes both canola and industrial rapeseed. 2/ Crop year runs from October 1 to September 30. Annual totals reported on a calendar year basis beginning in 1991.

3/ Includes similar oils.

Source: Department of Commerce, Bureau of the Census.

Table 32--Soybean oil consumption, with inedible by category, United States, 1987/88-94

Year 1/	Total consumption	Total edible	Total inedible	Soap	Paint or varnish	Feed	Resins and plastics	Lubricants 2/	Fatty acids	Other products
--Million pounds--										
1987/88	10,714.5	10,429.1	285.3	2.7	54.1	d	106.1	d	d	72.3
1988/89	9,917.6	9,635.8	281.8	1.5	34.9	d	123.7	d	d	68.2
1989/90	10,808.3	10,536.7	271.6	d	38.2	d	112.4	d	d	52.4
1991	11,267.7	10,966.7	301.0	d	49.2	d	104.7	d	d	40.4
1992	11,471.6	11,168.7	302.8	d	43.5	22.3	94.0	5.9	d	69.8
1993	12,495.6	12,200.9	294.7	d	38.7	23.7	98.1	5.8	d	65.8
1994	12,474.1	12,157.8	316.3	d	47.6	d	119.6	d	d	91.9

d = Data withheld to avoid disclosing figures for individual companies.

1/ Crop year runs from October 1 to September 30. Annual totals reported on a calendar year basis beginning in 1991. 2/ Includes similar oils.

Source: Department of Commerce, Bureau of the Census.

Table 33--Tall oil consumption, with inedible by category, United States, 1987/88-94

Year 1/	Total consumption	Total edible	Total inedible	Soap	Paint or varnish	Feed	Resins and plastics	Lubricants 2/	Fatty acids	Other products
--Million pounds--										
1987/88	1,269.4	0.0	1,269.4	16.8	23.3	0.0	20.9	9.6	1,181.1	17.8
1988/89	1,234.3	0.0	1,234.3	8.3	31.8	0.0	18.0	8.1	1,157.3	10.8
1989/90	1,024.7	0.0	1,024.7	8.4	7.4	0.0	21.7	7.1	969.9	10.2
1991	940.0	0.0	940.0	3.5	5.4	0.0	11.6	4.0	906.5	9.0
1992	883.5	0.0	883.5	d	d	0.0	19.4	7.0	841.8	11.4
1993	891.8	0.0	891.8	d	d	0.0	23.0	6.3	806.9	d
1994	1,362.5	0.0	1,362.5	d	d	0.0	48.4	6.1	1,025.0	d

d = Data withheld to avoid disclosing figures for individual companies.

1/ Crop year runs from October 1 to September 30. Annual totals reported on a calendar year basis beginning in 1991. 2/ Includes similar oils.

Source: Department of Commerce, Bureau of the Census.

Table 34--Castor oil prices, raw No. 1, tanks, Brazilian, 1989-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
--Cents/pound--												
1989	51.00	51.75	51.90	51.50	51.50	51.50	51.50	51.50	41.20	51.50	51.50	53.75
1990	54.50	53.50	52.60	52.00	51.20	51.00	51.00	51.00	45.00	42.40	39.63	39.63
1991	39.30	36.00	36.75	37.00	37.00	36.50	35.50	35.00	35.00	35.40	35.00	37.50
1992	37.50	37.50	37.50	36.00	34.50	34.50	34.50	34.50	34.00	34.00	34.00	34.00
1993	34.00	32.00	32.00	32.00	37.00	37.00	37.00	37.00	38.50	44.00	44.00	44.00
1994	44.00	41.75	41.00	41.00	46.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00
1995	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00				

Source: Chemical Marketing Reporter.

Table 35--Coconut oil prices, crude, tanks, f.o.b. New York, 1989-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
--Cents/pound--												
1989	26.75	27.63	27.90	28.94	29.90	29.56	28.94	27.75	28.63	27.25	26.35	24.81
1990	24.31	23.69	22.10	21.63	21.30	20.31	19.16	18.58	18.26	18.18	20.45	20.13
1991	20.22	20.31	20.50	19.38	19.69	21.69	26.19	25.63	25.63	28.50	31.50	32.38
1992	39.33	36.00	34.57	34.75	33.56	32.13	29.63	27.31	27.88	26.94	27.00	25.50
1993	24.94	24.33	23.65	23.25	24.13	24.95	25.35	25.61	24.44	23.88	25.62	33.06
1994	30.30	30.94	29.56	30.19	29.45	30.25	29.56	30.35	30.63	30.60	34.19	33.69
1995	32.50	32.00	31.13	31.00	30.50	35.00	34.50	35.63				

Source: Chemical Marketing Reporter.

Table 36--Flaxseed, average price received by farmers, United States, 1989-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
--Dollars/bushel--												
1989	8.34	8.70	8.09	7.78	7.54	6.79	5.90	6.49	7.07	7.09	7.15	7.14
1990	7.24	7.69	8.03	8.60	8.23	8.31	7.56	5.86	5.36	5.15	5.16	5.15
1991	5.12	4.80	4.90	4.66	4.33	3.98	3.91	3.69	3.55	3.40	3.31	3.46
1992	3.39	3.43	3.52	3.53	3.61	3.67	3.70	3.71	4.12	4.09	4.10	4.21
1993	4.12	4.47	4.54	4.41	4.35	4.44	4.29	3.80	4.25	4.09	4.05	4.18
1994	4.38	4.61	4.64	4.60	4.43	4.25	4.28	4.52	4.54	4.49	4.51	4.71
1995	4.75	4.94	5.15	5.10	4.93	4.86	5.10	5.14				

Source: National Agricultural Statistical Service, USDA.

Table 37--Industrial rapeseed oil prices, refined, tanks, New York, 1989-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
--Cents/pound--												
1989	70.00	70.00	80.25	80.25	80.25	80.25	80.25	80.25	80.25	64.20	80.25	80.25
1990	81.75	82.25	82.25	82.25	82.25	82.25	82.25	82.25	79.75	77.25	77.25	81.00
1991	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25
1992	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	67.25	62.25	62.25	62.25
1993	62.25	62.25	62.25	62.25	55.88	53.75	53.75	53.75	53.75	53.75	53.75	53.75
1994	53.75	53.75	53.75	53.75	53.75	53.75	53.75	53.75	53.75	53.75	53.75	53.75
1995	53.75	53.75	53.75	53.75	53.15	50.75	50.75	50.75				

Source: Chemical Marketing Reporter.

Table 38--Inedible tallow prices, Chicago, 1989-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
--Cents/pound--												
1989	14.90	16.00	14.86	14.60	14.70	15.10	14.48	13.52	14.13	10.94	14.75	14.25
1990	14.87	14.50	14.47	13.50	13.51	14.01	13.50	10.12	13.50	13.42	14.09	14.50
1991	14.53	12.91	13.63	13.57	12.25	12.36	12.96	14.00	13.50	13.68	13.08	12.50
1992	12.25	12.63	12.68	13.25	13.75	13.98	14.75	15.42	15.25	15.73	16.75	13.52
1993	15.36	14.69	15.24	15.94	15.00	15.11	14.95	14.58	14.54	14.68	14.50	14.94
1994	15.00	15.00	15.22	19.00	15.25	15.63	16.67	18.64	19.50	19.78	20.38	22.48
1995	21.75	18.66	18.00	17.75	17.50	17.89	19.61	19.81				

Source: Grain and Feed Marketing News.

Table 39--Jojoba oil prices, 1 metric ton or more, f.o.b. Arizona, 1989-95 1/

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
--Dollars/kilogram--												
1989	14.18	14.18	14.18	14.18	14.18	14.18	15.25	15.25	15.25	15.25	15.25	15.25
1990	15.25	20.02	20.02	20.02	20.02	20.02	26.00	26.00	25.00	25.00	24.00	24.00
1991	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	21.00	15.50	15.50	15.50
1992	15.50	15.50	15.50	15.50	15.50	15.50	15.50	13.50	13.50	11.99	11.99	11.99
1993	11.99	11.99	11.99	11.99	12.00	12.00	12.00	12.00	10.02	10.02	10.02	10.02
1994	10.02	10.02	9.01	9.01	9.01	9.01	9.01	9.01	9.01	9.01	9.01	8.48
1995	8.48	8.48	8.48	8.48	8.48	8.48	8.48	8.48				

1/ Price quotes are the low end of a range.

Source: Chemical Marketing Reporter.

Table 40--Linseed oil prices, tanks, Minneapolis, 1989-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
--Cents/pound--												
1989	41.00	41.00	41.40	42.00	42.00	39.75	39.00	39.00	39.50	40.00	40.00	39.50
1990	40.00	40.00	41.60	42.00	42.00	43.00	44.00	40.40	39.75	36.80	36.00	36.00
1991	36.00	36.00	36.00	36.00	36.50	36.00	36.00	36.00	36.00	30.00	30.00	30.00
1992	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	32.00	32.00	32.00	32.00
1993	32.00	32.00	32.00	32.00	32.00	28.50	32.00	32.00	32.00	32.00	32.00	32.00
1994	32.00	32.00	32.00	32.00	32.00	32.00	30.31	32.00	32.00	33.50	35.00	35.00
1995	35.00	35.00	35.00	35.00	35.00	35.00	35.00					

Source: Grain and Feed Marketing News.

Table 41--Linseed meal prices, bulk, 34 percent protein, Minneapolis, 1989-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
--Dollars/ton--												
1989	164.00	151.25	150.00	155.00	156.00	162.50	158.75	161.00	145.00	129.00	126.25	128.75
1990	132.50	124.50	126.25	133.75	143.00	142.50	136.00	126.25	116.25	133.00	143.75	133.50
1991	131.00	131.25	120.00	121.00	126.25	134.25	133.00	131.25	116.25	128.00	113.75	127.80
1992	122.00	124.00	115.00	117.50	120.00	125.00	123.50	126.25	131.00	141.25	152.50	137.40
1993	136.70	142.50	135.40	125.50	125.00	123.20	133.75	150.00	148.75	147.50	161.80	140.00
1994	140.00	130.00	126.00	125.00	125.00	111.40	114.90	111.60	N.A.	122.50	110.00	95.60
1995	82.40	85.25	90.00	94.40	85.00	85.00	92.50					

N.A. = Not available.

Source: Grain and Feed Marketing News.

Table 42--Palm kernel oil prices, bulk, c.i.f. U.S. ports, 1989-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
--Cents/pound--												
1989	23.63	23.81	23.94	23.59	25.09	23.91	22.50	21.38	22.16	22.19	21.28	19.75
1990	20.17	18.58	18.00	16.50	17.44	16.17	15.42	14.94	14.75	16.00	17.75	17.75
1991	18.94	17.92	17.25	16.08	16.38	17.08	24.63	24.67	20.92	24.35	25.00	29.38
1992	34.50	35.00	31.58	34.00	31.50	30.08	27.42	25.42	26.88	26.50	26.42	24.50
1993	23.00	23.00	21.67	20.67	32.08	33.33	31.33	31.92	21.00	20.67	22.50	30.94
1994	29.88	27.58	26.75	29.56	32.08	33.33	31.25	31.92	34.75	36.33	37.33	39.13
1995	37.08	34.33	34.70	31.75	31.00	34.50	35.25	34.31				

Source: Chemical Marketing Reporter.

Table 43--Soybean oil prices, crude, tanks, f.o.b. Decatur, 1989-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
--Cents/pound--												
1989	21.13	21.21	22.11	21.97	22.23	20.75	19.66	18.08	18.77	19.02	19.57	19.11
1990	19.28	20.27	22.80	23.35	24.72	25.03	24.69	25.05	24.45	22.59	21.05	21.55
1991	21.56	21.66	22.21	21.50	20.23	19.65	19.05	20.23	20.46	19.57	18.78	18.99
1992	18.77	18.88	19.74	19.00	20.15	20.71	18.82	17.87	18.28	18.36	20.10	20.52
1993	21.23	20.72	21.00	21.24	21.15	21.30	24.13	23.46	20.93	23.61	22.98	24.22
1994	29.91	28.85	29.03	27.94	29.48	29.43	27.20	25.02	24.87	24.73	24.75	24.75
1995	29.04	28.15	28.33	26.30	26.00	26.78	27.60	26.56				

Source: The Wall Street Journal.

Table 44—Cedarwood oil prices, drums or cans, 1992-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Dollars per pound												
Chinese												
1992	N.A.	1.55	1.55	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70
1993	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70
1994	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70
1995	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70			
Texas												
1992	N.A.	3.20	3.20	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30
1993	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30
1994	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.70
1995	3.70	3.70	3.70	3.70	3.70	3.70	3.70	4.15	4.15			
Virginia												
1992	N.A.	5.25	5.25	5.35	5.35	5.35	5.35	5.35	5.50	5.50	5.50	5.50
1993	5.80	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
1994	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
1995	6.50	6.70	6.70	6.70	6.70	6.90	6.90	6.90	6.90			

N.A. = Not available.

Source: Chemical Marketing Reporter.

Table 45—Citronella oil prices, drums, 1992-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Dollars per pound												
Java												
1992	N.A.	1.95	1.95	2.38	2.38	2.38	2.38	2.38	2.53	2.53	2.53	2.53
1993	2.53	2.53	2.53	2.53	2.53	3.10	3.10	3.10	3.10	3.60	3.80	4.00
1994	4.00	4.30	4.30	4.15	4.15	4.15	4.15	4.75	4.75	5.00	5.50	6.00
1995	6.00	7.90	8.43	8.43	8.43	8.60	8.60	N.A.	N.A.			
China												
1992	N.A.	1.90	1.90	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20
1993	2.20	2.25	2.35	2.35	2.35	3.13	3.13	3.13	3.13	3.25	3.50	4.00
1994	4.00	4.20	4.20	4.05	4.05	4.05	4.05	4.40	4.40	5.00	5.40	6.10
1995	7.00	7.90	8.35	8.35	8.35	8.60	8.60	7.90	6.80			

N.A. = Not available.

Source: Chemical Marketing Reporter.

Table 46—Eucalyptus oil prices, Chinese, 80 percent, 1992-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Dollars per pound												
1992	N.A.	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08
1993	2.88	2.88	2.88	2.88	2.88	2.63	2.63	2.63	2.63	2.63	2.63	2.63
1994	2.63	2.63	2.63	1.90	1.90	1.90	1.90	2.00	2.00	2.00	2.00	2.15
1995	2.38	2.50	2.50	2.80	3.00	3.20	3.20	3.20	2.90			

N.A. = Not available.

Source: Chemical Marketing Reporter.

Table 47—Grapefruit oil prices, drums, 1992-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Dollars per pound												
Florida												
1992	N.A.	5.00	5.00	5.25	5.25	5.25	5.25	5.50	4.95	4.95	4.95	4.95
1993	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
1994	6.00	6.00	6.00	6.75	6.75	6.75	7.50	8.25	8.25	8.25	8.25	8.25
1995	8.25	8.25	8.25	11.25	11.25	11.25	11.25	11.25	15.75			
Israeli												
1992	N.A.	4.25	4.25	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.13
1993	N.A.	N.A.	N.A.	4.63	4.63	4.63	4.63	4.63	4.63	4.63	4.63	4.63
1994	4.63	4.63	4.63	4.63	4.63	4.63	4.63	4.63	4.63	4.63	4.63	4.63
1995	4.63	4.63	4.63	4.63	4.63	4.63	4.63	4.63	4.63			

N.A. = Not available.

Source: Chemical Marketing Reporter.

Table 48--Lemon oil prices, 1992-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Dollars per pound												
Argentina												
1992	N.A.	9.50	9.50	9.50	9.50	9.50	9.50	9.50	10.25	10.25	10.25	10.25
1993	10.25	10.25	10.25	10.25	10.25	10.25	10.25	10.25	10.25	10.25	10.25	10.25
1994	10.25	11.00	11.00	11.00	11.00	11.00	11.50	11.50	11.50	11.50	11.50	12.25
1995	12.25	12.25	12.25	12.25	12.25	12.25	12.25	12.65	12.65			
California, U.S. Pharmacopeia, drums												
1992	N.A.	8.93	8.93	8.93	8.93	8.93	10.50	10.50	10.50	10.50	10.50	10.50
1993	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	9.50
1994	9.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50
1995	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50	8.50			
Italian												
1992	N.A.	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
1993	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
1994	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
1995	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00			

N.A. = Not available.

Source: Chemical Marketing Reporter.

Table 49--Lime oil prices, distilled, Mexican, drums, 1992-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Dollars per pound												
1992	N.A.	9.75	9.75	9.75	9.75	9.75	9.75	9.75	10.25	10.25	10.25	10.25
1993	10.25	10.25	10.25	10.25	10.25	10.25	10.25	10.25	10.25	10.25	10.25	10.25
1994	10.25	10.25	10.25	10.25	10.25	10.25	10.25	10.75	10.75	10.75	10.75	10.75
1995	10.75	10.75	10.75	10.75	10.75	10.75	12.00	13.50	13.50			

N.A. = Not available.

Source: Chemical Marketing Reporter.

Table 50--d-Limonene prices, drums, 1992-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Dollars per pound												
1992	N.A.	0.70	0.70	0.73	0.73	0.73	0.73	0.78	0.78	0.78	0.78	0.78
1993	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
1994	0.78	0.78	0.78	0.83	0.83	0.83	0.83	0.83	0.83	1.05	2.00	2.00
1995	2.00	2.00	2.35	2.35	3.00	3.00	3.00	2.50	2.50			

N.A. = Not available.

Source: Chemical Marketing Reporter.

Table 51--Menthol prices, natural, Chinese, drums, 1992-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Dollars per pound												
1992	N.A.	7.58	7.58	7.58	7.58	7.58	7.58	7.58	7.58	7.58	7.58	7.58
1993	6.35	5.68	5.68	5.10	5.10	5.10	5.10	5.10	5.10	5.00	5.00	5.00
1994	5.00	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	9.50	11.50	12.00
1995	12.00	12.50	11.00	9.75	9.75	9.00	9.00	9.00	9.80			

N.A. = Not available.

Source: Chemical Marketing Reporter.

Table 52—Orange oil prices, 1992-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Dollars per pound												
California, distilled, cans, f.o.b. plant												
1992	N.A.	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
1993	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
1994	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	2.00	2.00
1995	2.00	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50			
Florida, drums 1/												
1992	N.A.	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
1993	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
1994	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	1.10	2.00	2.00
1995	2.00	2.25	2.50	2.75	2.75	2.75	2.75	2.75	2.75			
Brazilian 2/												
1992	N.A.	0.80	0.80	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
1993	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
1994	0.75	0.75	0.75	0.78	0.78	0.78	0.78	0.78	0.78	1.10	2.00	2.00
1995	2.00	2.40	2.40	2.55	2.70	2.70	2.70	2.43	2.63			

N.A. = Not available.

1/ Florida, midseason, drums beginning in February 1994. 2/ Pera Brazil, drums, f.o.b. plant beginning in February 1994.

Source: Chemical Marketing Reporter.

Table 53—Peppermint oil prices, 1992-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Dollars per pound												
Midwest U.S.												
1992	N.A.	18.00	14.50	14.50	14.50	14.50	14.50	14.50	13.35	13.35	13.35	13.35
1993	13.35	13.35	13.35	13.35	13.35	13.35	13.35	13.35	13.35	13.50	13.50	13.50
1994	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50
1995	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50	13.50			
Yakima U.S.												
1992	N.A.	15.00	13.50	13.50	13.50	13.50	13.50	13.50	12.30	12.30	12.30	12.30
1993	12.30	12.30	12.30	12.30	12.30	12.30	12.30	12.30	12.30	15.00	15.00	15.00
1994	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
1995	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00			
Synthetic, drums, f.o.b. works												
1992	N.A.	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
1993	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	10.00	10.00	10.00	10.00
1994	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
1995	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00			
Chinese												
1992	N.A.	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.38	9.88
1993	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88
1994	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88
1995	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88	9.88			

N.A. = Not available.

Source: Chemical Marketing Reporter.

Table 54—Spearment oil prices, 1992-95

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Dollars per pound												
Far West, native												
1992	N.A.	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
1993	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	11.00	11.00	11.00
1994	11.00	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50
1995	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50			
Far West, Scotch												
1992	N.A.	20.00	16.00	15.00	15.00	15.00	15.00	13.00	14.40	14.40	14.40	14.40
1993	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	12.50	12.50	12.50
1994	12.50	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00
1995	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00			
Chinese, 80 percent												
1992	N.A.	27.50	27.50	26.40	26.40	26.40	26.40	26.40	26.40	26.40	26.40	26.40
1993	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
1994	7.50	7.50	7.50	7.50	7.50	5.75	5.75	5.75	5.75	5.75	5.50	6.00
1995	6.00	6.70	6.70	6.70	7.00	7.00	7.00	7.50	8.50			

N.A. = Not available.

Source: Chemical Marketing Reporter.

Table 55--Selected prices for biobased chemicals and derivatives 1/

Item	Unit	Average annual price 2/						
		1989	1990	1991	1992	1993	1994	1995
Starches, sugars, and gums								
Arabic gum, National Formulary, powdered, barrels	Dollars per pound	1.85	1.85	1.85	2.67	3.44	4.00	4.00
Denatured alcohol, ethyl (ethanol), CD18, CD19, tanks, delivered east	Dollars per gallon	2.09	2.11	2.08	2.02	2.02	2.26	2.41
Dextrin, corn, canary dark, paper bags, carload, works	Cents per pound	31.01	32.00	32.00	32.00	32.00	32.00	32.00
Dextrose, hydrated, commercial, bags, carload, delivered New York	Cents per pound	25.29	25.50	25.50	25.50	25.50	25.50	21.86
Furfural, tanks, f.o.b. plant	Cents per pound	75.00	77.33	79.00	79.00	79.00	79.00	79.00
Guar gum, industrial, high viscosity, bags, carload, f.o.b. shipping point	Cents per pound	35.00	35.00	35.00	35.00	35.00	39.92	45.00
Karaya gum, No. 1, powdered, drums	Dollars per pound	3.50	3.31	3.25	3.25	3.25	3.25	3.25
Locust bean gum, powdered, bags	Dollars per pound	4.75	4.75	4.75	4.75	4.63	4.71	7.00
Pectin, high methoxyl	Dollars per pound	3.30	3.30	3.30	4.03	4.75	4.75	4.75
Sorbitol, U.S. Pharmacopeia, regular, 70-percent aqueous, drums, carload, f.o.b. shipping point	Cents per pound	39.58	40.17	33.29	33.00	33.00	33.00	33.00
Sucrose acetate isobutyrate, 90-percent, drums, truckload, delivered	Dollars per pound	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Sucrose octa-acetate, denaturing grade, 100-pound drums, f.o.b. works	Dollars per kilogram	12.50	12.50	12.50	12.50	12.50	12.50	12.50
Tragacanth gum, No. 1, ribbons, 100-pound drums	Dollars per pound	36.00	36.00	36.00	36.00	36.83	41.00	41.00
Xanthan gum, food grade, 100-pound drums, f.o.b. works	Dollars per pound	5.65	5.65	5.65	5.65	5.74	6.20	6.20
Fats, oils, and waxes								
Beeswax, refined, bleached, white bricks, 100-pound cartons	Dollars per pound	3.10	3.10	3.10	3.12	3.35	3.33	3.32
Butyl stearate, technical, tanks, f.o.b. works	Cents per pound	55.00	55.00	55.00	55.00	54.75	54.00	54.00
Capryl alcohol, secondary, 98-percent, tanks, f.o.b. works	Cents per pound	42.00	43.00	48.00	48.00	48.00	66.33	68.00
Caprylic acid, commercial, pure, tanks	Cents per pound	72.83	78.33	83.00	90.92	102.00	102.00	102.00
Carnauba wax, Parnahyba, No. 1, yellow, bags, ton lots	Dollars per pound	2.50	2.50	2.88	3.23	3.50	3.50	4.46
Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks, delivered	Cents per pound	79.00	75.92	64.00	56.63	64.08	100.75	110.14
Lecithin, unbleached, bulk, less carload, works	Cents per pound	37.00	35.00	29.00	28.00	25.75	25.00	25.00
Magnesium lauryl sulfate, tanks, f.o.b.	Cents per pound	36.00	43.00	43.00	43.00	47.75	57.25	57.25
Magnesium stearate, bulk	Dollars per pound	1.16	1.16	1.16	1.16	1.20	1.20	1.20
Menhaden oil, bulk, Gulf ports	Cents per pound	11.33	10.94	13.13	15.83	16.54	16.50	16.50
Myristic acid, commercial, pure, bags, truckload	Dollars per pound	0.88	0.79	0.67	1.10	1.25	1.17	1.15
Oleic acid, double distilled (white), tanks	Cents per pound	54.00	54.00	54.00	54.00	60.42	61.00	61.00
Sebacic acid, chemically pure, bags, carload, works	Dollars per pound	1.98	2.05	2.05	2.05	2.05	2.05	2.05
Sodium lauryl sulfate, 30-percent, drums, truckload, f.o.b. works	Cents per pound	38.33	43.00	43.00	43.00	47.75	57.25	57.25
Tallow fatty acids, technical, tanks, delivered	Cents per pound	29.00	29.00	24.88	23.50	23.50	23.50	23.50
Animal products								
Casein, acid precipitated, ground, 30-mesh, edible, imported, truckload, c.i.f.	Dollars per pound	2.50	2.50	2.50	2.52	2.55	2.55	2.55
Gelatin, edible, 100 AOAC test, drums, less truckload, delivered	Dollars per pound	1.50	1.50	1.54	1.68	1.70	1.70	1.70
Glue, bone, extracted, green, 85 jellygrams, bags, carload	Cents per pound	95.00	95.00	95.00	94.00	89.00	89.00	89.00
Lanolin, anhydrous, pharmaceutical, 400-pound drums, works	Dollars per pound	0.90	1.01	1.00	1.25	1.25	1.25	1.25
Forest products								
a-Pinene prices, technical grade	Cents per pound	33.00	43.00	43.00	43.00	52.00	60.00	60.00
b-Pinene 3/	Cents per pound	35.00	55.00	55.00	55.00	3/	114.00	114.00
Cellulose acetate, powdered, bags, truckload, delivered east	Dollars per pound	1.50	1.58	1.62	1.94	2.12	2.12	2.12
Tall oil, crude, Southeast, tanks, freight equaled	Dollars per ton	140.00	135.42	159.17	150.83	119.17	121.25	154.29
Turpentine prices, crude sulfate, tanks, f.o.b. Southeast	Dollars per gallon	2.05	1.75	1.36	0.88	0.68	0.50	0.53

See next page for footnotes and definitions.

1/ Spot and/or list prices from the *Chemical Marketing Reporter* for selected chemicals and related materials on a New York or other indicated basis. These prices do not represent bid, asked, or actual transaction prices. Variations from these prices may occur for differences in quantity, quality, and location. 2/ Some prices are from the low end of range. 3/ Price changed from technical grade to 99 percent perfume and flavor grade in October 1993.

Chemical definitions:

Arabic gum is a dried, water-soluble exudate from the stems of *Acacia senegal* and related species that is used in pharmaceuticals, adhesives, inks, textile printing, cosmetics, and confectionery and food products.

Denatured ethyl alcohol is made by yeast fermentation of carbohydrates or by hydrolysis of ethylene for solvents, cosmetics, and as an oxygenated gasoline additive.

Dextrin is obtained by heating acidified dry starch for adhesives and paper products.

Dextrose is obtained from cornstarch hydrolysis for use in foods and as a fermentation substrate.

Furfural is obtained by steam distillation of acidified plant materials for polymers and foundry binders.

Guar gum is a water-dispersible hydrocolloid from the seeds of the guar plant that is used in foods and industrial applications such as oil-well fracturing fluids.

Karaya gum is a hydrophilic polysaccharide from Indian trees of the genus *Sterculia* for use in pharmaceuticals, textile coatings, ice cream and other food products, and adhesives.

Locust bean gum is a polysaccharide plant mucilage from seeds of *Ceratania siliqua* used in cosmetics, textiles sizings and finishes, and drilling fluids, and in foods as a stabilizer, thickener, and emulsifier.

Pectin is obtained from citrus fruit rinds for use in jellies, foods, cosmetics, and drugs.

Sorbitol is obtained by hydrogenation of glucose for foods, cosmetics, and polyester polymers.

Sucrose acetate isobutyrate is made by controlled esterification of sucrose with acetic and isobutyric anhydrides for hot-melt coating formulations and extrudable plastics.

Sucrose octa-acetate is used as a plasticizer for cellulose esters and plastics, and in adhesive and coating compounds.

Tragacanth gum is polysaccharides from *Astragalus* bushes for use in pharmaceutical emulsions, adhesives, leather dressing, textile printing and sizing, dyes, and printing inks.

Xanthan gum is a synthetic, water-soluble polymer made by fermentation of carbohydrates for use in drilling fluids, ore floatation, foods, and pharmaceuticals.

Beeswax is a byproduct of honey production used for cosmetics and candles.

Butyl stearate is obtained by alcoholysis of stearin or esterification of stearic acid with butanol for use in polishes, special lubricants, and coatings and as a plasticizer and emollient in cosmetics and pharmaceuticals.

Capryl alcohol is obtained by distilling sodium ricinoleate, a castor oil derivative, with an excess of sodium hydroxide for solvents, plasticizers, wetting agents, and petroleum additives.

Caprylic acid is a fatty acid obtained from coconut oil for use in synthesizing dyes, drugs, perfumes, antiseptics, and fungicides.

Carnauba wax is a hard commercial wax obtained from leaves of *Copernicia cerifera* for shoe, furniture, and floor polishes; leather finishes; varnishes; electric-insulating compounds; and carbon paper.

Glycerine is a byproduct of splitting or saponification of fats and oils, or made by petrochemical synthesis for cosmetics, food, drugs, and polyurethane polymers.

Lecithin is a byproduct of soy oil extraction used as an emulsifying agent and antioxidant in foods.

Magnesium lauryl sulfate is a surfactant derived from fatty acids for use in plastics, plasticizers, textile applications, and consumer end-product manufacturing.

Magnesium stearate is a surfactant made from tropical oil fatty acids and inorganic materials for use in lubricant, adhesive, and detergent manufacturing.

Menhaden oil is obtained from menhaden fish for soaps, rubber compounding, printing inks, animal feed, and leather-dressing lubricants.

Myristic acid is obtained by fractional distillation of coconut and other vegetable oils for soaps, cosmetics, and synthesis of esters for flavors and perfumes.

Oleic acid is obtained by fractional crystallization from mixed fatty acids for candles, soaps, and synthesis of other surfactants.

Sebacic acid is made by high-temperature cleavage of castor oil for use as an intermediate chemical in the manufacture of polymers and plasticizers.

Sodium lauryl sulfate is synthesized from fatty acids for use in toothpaste and as a food additive and wetting agent for textiles.

Tallow fatty acids are made from splitting tallow for direct use as lubricants or in greases, and for separation into pure fatty acids.

Casein is a coagulated and dried milk protein for adhesives and plastics.

Gelatin is water extracted from bones and hides for photographic emulsions and food.

Glue (bone) is obtained by steam treatment and water extraction of bones for glue and mineral flotation processes.

Lanolin is extracted from wool for cosmetics, leather dressing, and lubricants.

a-Pinene and *b-Pinene* are chemical intermediates fractionated from turpentine that are converted to pine oil (*a-Pinene*), terpene resins (*b-Pinene*), and specialty chemicals.

Cellulose acetate is made by reacting cellulose from wood with acetic acid for rayon textiles and cigarette filters.

Tall oil (crude) is a byproduct of paper production (chemical pulping) for refining into rosin and fatty acids.

Turpentine (crude sulfate) is obtained by steam distillation of pine gum recovered from pulping softwoods (for paper production), which is used for *a-* and *b-pinene*.

Table 56—U.S. imports of nonwood fibers, yarns, twine, and cordage, 1989-94

Item	Unit	1989	1990	1991	1992	1993	1994
Flax, raw or processed but not spun	Metric tons	72,222	67,659	55,046	48,166	47,030	55,059
Jute, raw or processed but not spun	Metric tons	6,831	3,931	5,468	6,246	7,326	7,026
Flax yarn	Kilograms	528,770	587,553	413,301	690,248	888,656	1,113,918
Jute yarn	Kilograms	7,893,451	5,757,241	7,489,781	5,380,531	5,046,250	4,312,393
Abaca twine and cordage	Kilograms	6,321,518	7,571,631	6,111,529	5,623,279	6,930,999	7,652,898
Jute twine and cordage	Kilograms	1,772,656	3,321,647	1,998,699	6,623,013	7,606,930	15,403,623
Sisal twine and cordage	Kilograms	86,202,330	87,114,936	76,371,329	73,056,843	71,595,465	78,704,800

Source: Department of Commerce, Bureau of the Census.

Table 57—U.S. exports of nonwood fibers, yarns, twine, and cordage, 1989-94

Item	Unit	1989	1990	1991	1992	1993	1994
Flax, raw or processed but not spun	Metric tons	150	160	559	3,687	121	92
Jute, raw or processed but not spun	Metric tons	5,872	3,539	3,135	1,534	1,202	2,353
Flax yarn	Kilograms	31,645	219,806	123,132	209,218	363,084	112,330
Jute yarn	Kilograms	801,488	626,861	604,414	591,864	575,383	236,225
Jute twine and cordage	Kilograms	356,962	157,922	200,323	305,873	297,794	462,136
Sisal twine and cordage	Kilograms	264,202	1,231,926	1,250,597	1,366,504	1,150,473	519,285

Source: Department of Commerce, Bureau of the Census.

Table 58—U.S. imports of selected vegetable oils, 1989-94

Item	Unit	1989	1990	1991	1992	1993	1994
Castor oil, crude and refined	Metric tons	37,835	30,969	34,523	34,018	42,214	44,094
Coconut oil, crude and refined	Metric tons	391,903	452,227	390,994	501,466	443,496	441,332
Linseed oil, crude and refined	Metric tons	3	8	94	351	159	426
Jobba oil and its fractions	Metric tons	216	182	384	235	142	198
Tung oil and its fractions	Metric tons	6,472	4,045	5,645	4,995	4,272	5,404

Source: Department of Commerce, Bureau of the Census.

Table 59—U.S. exports of selected vegetable oils, 1989-94

Item	Unit	1989	1990	1991	1992	1993	1994
Coconut oil, crude and refined	Metric tons	20,431	18,218	21,131	9,448	6,364	8,494
Linseed oil, crude and refined	Metric tons	6,767	3,026	4,469	3,940	3,804	5,402
Jobba oil and its fractions	Metric tons	213	279	327	209	351	287
Tung oil and its fractions	Metric tons	217	312	500	329	297	176

Source: Department of Commerce, Bureau of the Census.

Table 60—U.S. imports of pulp and paper products, 1989-94

Item	Unit	1989	1990	1991	1992	1993	1994
Chemical woodpulp	Metric tons	4,046,477	3,924,446	4,085,883	4,145,682	4,435,134	4,629,028
Semichemical woodpulp	Metric tons	153,811	172,213	163,516	175,290	245,046	226,845
Mechanical woodpulp	Metric tons	173,319	141,186	126,570	107,983	145,804	199,878
Cotton linters pulp	Metric tons	503	110	1	20	10	20
Other cellulosic fiber pulps	Thou. metric tons	9,706	12,624	10,735	9,360	7,377	15,791
Newsprint	Metric tons	7,953,643	7,529,308	6,794,898	6,658,426	7,061,513	7,149,976
Writing paper with less than 10 percent mechanical pulp	Kilograms	270,490,245	303,174,702	215,221,877	248,618,324	275,800,767	190,676,102
Straw paper and paperboard	Kilograms	50,000	8,415	833	678	9,756	528,865
Corrugated paper and paperboard	Kilograms	5,219,325	12,621,535	4,067,556	4,551,194	2,724,891	19,236,125

Source: Department of Commerce, Bureau of the Census.

Table 61—U.S. exports of pulp and paper products, 1989-94

Item	Unit	1989	1990	1991	1992	1993	1994
Chemical woodpulp	Metric tons	4,831,039	4,608,672	5,003,677	5,734,372	5,213,541	5,388,110
Semichemical woodpulp	Metric tons	32,414	11,019	15,291	19,578	24,885	24,450
Mechanical woodpulp	Metric tons	30,904	28,536	30,313	71,180	69,094	67,342
Cotton linters pulp	Metric tons	69,112	60,832	67,591	74,717	70,140	84,611
Other cellulosic fiber pulps	Metric tons	41,606	62,212	30,854	30,477	42,947	12,049
Writing paper with less than 10 percent mechanical pulp	Kilograms	24,510,287	21,710,457	48,753,346	74,413,780	69,953,501	116,852,248
Straw paper and paperboard	Kilograms	188,716	246,957	256,011	284,247	98,652	557,401
Corrugated paper and paperboard	Kilograms	41,572,999	67,643,829	55,948,853	48,058,868	43,613,552	41,433,989

Source: Department of Commerce, Bureau of the Census.