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Table 7--Flaxseed, acreage planted, harvested, yield, production, and value, United States, 1985-93

Year	Planted --1,000 acres--	Harvested	Yield	Production	Value
			Bushels per acre	1,000 bushels	\$1,000
1985	620	584	14.2	8,293	41,912
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 1/	171	165	19.9	3,288	13,543
1993 2/	206	191	18.2	3,480	14,641

1/ Preliminary. 2/ Forecast.

Table 8--Linseed oil, supply and disappearance, United States, 1985/86-1993/94

Year beginning June 1	Supply			Disappearance			Ending stocks
	Beginning stocks	Production	Total	Exports	Domestic	Total	
--Million pounds--							
1985/86	33	205	238	15	184	199	39
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 1/	40	172	212	8	150	158	54
1993/94 2/	54	176	230	6	164	170	60

1/ Preliminary. 2/ Forecast.

Table 9--Linseed meal, supply and disappearance, United States, 1985/86-1993/94

Year beginning June 1	Supply				Disappearance			Ending stocks
	Beginning stocks	Production	Imports	Total	Exports	Domestic	Total	
--1,000 short tons--								
1985/86	3	184	3	190	75	110	185	5
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 1/	5	159	2	166	55	106	161	5
1993/94 2/	5	161	2	168	45	118	163	5

1/ Preliminary. 2/ Forecast.

Table 10--Rapeseed, acreage planted, harvested, yield, production, and value, United States, 1987-93

Year	Planted		Harvested		Yield	Production	Value
	--1,000 acres--				Bushels per acre	1,000 pounds	Million dollars
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 1/	12.0		9.8		29.5	14,455	1.45
1993 2/	7.2		6.1		24.4	7,442	0.92

N.A. = Not available.

1/ Preliminary. 2/ Forecast.

Table 11--Industrial rapeseed, supply, disappearance, and price, United States, 1987/88-1993/94

Year beginning June 1	Supply			Disappearance			Ending stocks	Price
	Beginning stocks	Production	Total	Exports 1/	Domestic	Total		Minn- neapolis
								Cents/lb.
--Million pounds--								
1987/88	2,198	21,981	24,179	0	23,072	23,072	1,107	10.00
1988/89	1,107	15,822	16,929	0	16,188	16,188	741	11.10
1989/90	741	19,143	19,884	0	19,003	19,003	882	10.50
1990/91	882	22,717	23,599	0	22,319	22,319	1,279	10.30
1991/92	1,279	16,146	17,425	0	17,158	17,158	267	10.10
1992/93 2/	267	14,455	14,722	0	14,522	14,522	200	10.00
1993/94 3/	200	7,442	7,642	0	7,492	7,492	150	12.40

1/ Trade data does not distinguish between industrial and edible (canola) exports, therefore all exports were allocated to canola. 2/ Preliminary. 3/ Forecast.

Table 12--Industrial rapeseed oil, supply, disappearance, and price, United States, 1987/88-1993/94

Year beginning June 1	Supply				Disappearance			Ending stocks	Price
	Beginning stocks	Production	Imports	Total	Exports 1/	Domestic	Total		Minn- neapolis
									Cents/lb.
--Million pounds--									
1987/88	800	6,785	17,637	25,222	0	22,699	22,699	2,522	23.60
1988/89	2,522	6,858	35,274	44,654	0	40,188	40,188	4,465	25.60
1989/90	4,465	8,184	29,407	42,056	0	37,851	37,851	4,206	27.80
1990/91	4,206	6,960	20,657	31,823	0	28,640	28,640	3,182	24.50
1991/92	3,182	5,705	8,647	17,534	0	15,780	15,780	1,753	22.60
1992/93 2/	1,753	3,707	9,968	15,429	0	13,886	13,886	1,543	24.30
1993/94 3/	1,543	3,390	11,218	16,157	0	14,536	14,536	1,615	

1/ Trade data does not distinguish between industrial and edible (canola) exports, therefore all exports were allocated to canola. 2/ Preliminary. 3/ Forecast.

Table 13--Industrial rapeseed meal, supply, disappearance, and price, United States, 1987/88-1993/94

Year beginning June 1	Supply				Disappearance			Ending stocks	Price
	Beginning stocks	Production	Imports	Total	Exports	Domestic	Total		Minn- neapolis
									Cents/lb.
--Million pounds--									
1987/88	300	10,624	0	10,924	0	10,711	10,711	212	168.00
1988/89	212	10,738	0	10,950	0	10,736	10,736	215	177.00
1989/90	215	12,815	0	13,030	0	12,773	12,773	256	149.00
1990/91	256	10,897	0	11,153	0	10,935	10,935	218	145.00
1991/92	218	8,933	0	9,151	0	9,017	9,017	134	151.00
1992/93 1/	134	5,805	0	5,939	0	5,852	5,852	87	155.00
1993/94 2/	87	5,308	0	5,395	0	5,315	5,315	80	160.00

1/ Preliminary. 2/ Forecast.

Table 14--Canola oil prices, Midwest markets, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
--Cents/pound--													
1989	25.00	25.30	26.40	26.25	25.55	23.44	22.50	22.38	23.00	23.19	25.31	25.60	24.49
1990	26.69	27.50	28.94	29.25	31.15	27.19	25.31	26.90	18.38	24.38	24.63	23.13	26.12
1991	24.00	23.56	24.38	24.88	24.25	23.75	22.90	23.94	24.56	23.05	23.38	22.42	23.76
1992	22.25	21.75	21.75	20.75	22.00	22.31	20.94	20.69	22.90	22.19	24.38	23.08	22.08
1993	24.69	23.81	23.94	23.63	N.A.	N.A.	N.A.	N.A.	24.50	23.38	26.42	29.35	24.96
1994	30.17	30.31	30.50	29.50									

N.A. = Not available.

Source: Milling and Baking News.

Table 15--Castor oil prices, raw No. 1, tanks, Brazilian, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
--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	50.84
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	48.62
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	36.33
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	35.21
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	37.37
1994	44.00	41.75	41.00	41.00									

Source: Chemical Marketing Reporter.

Table 16--Cocoa butter spot prices, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
--Dollars/pound--													
1989	1.62	1.62	1.72	1.72	1.55	1.45	1.45	1.45	1.35	1.35	1.35	1.35	1.50
1990	1.35	1.30	1.30	1.30	1.30	1.52	1.50	1.50	1.60	1.60	1.60	1.61	1.46
1991	1.61	1.61	1.53	1.53	1.53	1.33	1.22	1.22	1.22	1.22	1.22	1.22	1.37
1992	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.29	1.29	1.29	1.29	1.29	1.25
1993	1.29	1.29	1.35	1.35	1.35	1.35	1.35	1.35	1.40	1.40	1.45	1.45	1.37
1994	1.45	1.45	1.45	1.45	1.45								

Source: Chemical Marketing Reporter.

Table 17--Coconut oil prices, crude, tanks, f.o.b. New York, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
--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	27.87
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	20.67
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	24.30
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	31.22
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	25.27
1994	52.30	30.94	29.56	30.19									

Source: Chemical Marketing Reporter.

Table 18--Edible tallow prices, Chicago, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
--Cents/pound--													
1989	16.50	16.07	16.25	15.75	16.19	16.00	15.73	15.33	16.50	16.18	N.A.	N.A.	13.37
1990	16.77	17.16	15.46	14.25	14.20	14.28	14.21	10.53	13.76	14.55	15.00	15.28	14.62
1991	15.88	14.28	14.43	14.80	13.02	13.25	13.70	14.61	14.37	14.60	14.09	14.00	14.25
1992	14.05	14.00	14.15	14.28	14.66	15.37	15.87	16.00	16.05	16.88	18.18	17.00	15.54
1993	16.08	15.39	16.07	17.15	17.08	16.03	15.18	16.00	16.21	16.95	16.53	16.50	16.26
1994	16.75	16.50	16.75	16.75									

N.A. = Not available.

Source: Grain and Feed Marketing News.

Table 19--Flaxseed, average price received by farmers, United States, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
--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	7.29
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	5.53
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	3.57
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	3.94
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	4.25
1994	4.40	4.55	4.60	4.55									

Source: National Agricultural Statistical Service, USDA.

Table 20--Industrial rapeseed oil prices, refined, tanks, New York, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
--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	77.20
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	81.06
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	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	76.00
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	56.76
1994	53.75	53.75	53.75	53.75									

Source: Chemical Marketing Reporter.

Table 21--Inedible tallow prices, Chicago, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
--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	14.35
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	13.67
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	13.25
1992	N.A.	12.63	12.68	13.25	13.75	13.98	14.75	15.42	15.25	15.73	16.75	13.52	14.34
1993	15.09	14.69	15.24	15.94	15.00	15.11	14.95	14.58	14.54	14.68	14.50	14.94	14.94
1994	15.25	15.33	15.25	15.00									

N.A. = Not available.

Source: Grain and Feed Marketing News.

Table 22--Jojoba oil prices, 1 metric ton or more, f.o.b. Arizona, 1989-94 1/

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
--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	14.72
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	22.11
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	21.63
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	14.29
1993	11.99	11.99	11.99	11.99	12.02	12.02	12.02	12.02	10.03	10.03	10.03	10.03	11.35
1994	10.03	10.03	10.03	9.02	9.02								

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

Source: Chemical Marketing Reporter.

Table 23--Linseed oil prices, tanks, Minneapolis, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
--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	40.35
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	40.13
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	34.54
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	28.17
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	31.71
1994	32.00	32.00	32.00	32.00									

Source: Grain and Feed Marketing News.

Table 24--Linseed meal prices, bulk, 34-percent protein, Minneapolis, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
--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	148.96
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	132.60
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	126.15
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	127.95
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	139.18
1994	140.00	130.00	126.00	125.00									

N.A. = Not available.

Source: Grain and Feed Marketing News.

Table 25--Palm kernel oil prices, bulk, c.i.f. U.S. ports, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
--Cents/pound--													
1989	25.00	25.00	23.00	23.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00
1990	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00
1991	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00
1992	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00
1993	23.00	23.00	23.00	23.00	23.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	20.67
1994	19.00	19.00	19.00	19.00	19.00								

Source: Chemical Marketing Reporter.

Table 26--Soybean oil prices, crude, tanks, f.o.b. Decatur, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
--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	21.09
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	22.28
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	20.98
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	19.13
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	22.16
1994	29.91	28.85	29.03	27.94									

Source: The Wall Street Journal.

Table 27--Selected prices for biobased chemicals and derivatives 1/

Item	Unit	Average annual price 2/				
		1989	1990	1991	1992	1993
Aluminum stearate, carload	Dollars per pound	1.46	1.46	1.46	1.48	1.54
Anise seed oil, Chinese, drums	Dollars per kilogram	16.30	16.30	16.30	16.30	10.46
Arabic gum, National Formulary, powdered, barrels	Dollars per pound	1.85	1.85	1.85	2.67	3.44
Bacitracin, U.S. Pharmacopeia, nonsterile, 1 billion units or more	MM units	7.80	7.80	7.80	7.80	7.59
Bay oil, National Formulary, 50-55 percent, drums	Dollars per pound	13.50	15.25	24.00	25.50	26.00
Beeswax, refined, bleached, white bricks, 100-pound cartons	Dollars per pound	3.10	3.10	3.10	3.12	3.35
Bergamot oil, Italian	Dollars per kilogram	110.00	107.08	167.25	184.25	64.17
Butyl oleate, distilled, drums, carload, f.o.b. works	Cents per pound	70.00	70.00	70.00	70.00	70.00
Butyl stearate, technical, tanks, f.o.b. works	Cents per pound	55.00	55.00	55.00	55.00	54.75
Calcium gluconate, U.S. Pharmacopeia, powdered, f.o.b. warehouse	Dollars per pound	1.80	1.80	2.44	2.50	2.51
Camphor, U.S. Pharmacopeia, powdered, 50-kilogram drums, 10,000 pounds or more	Dollars per pound	5.50	5.50	5.50	5.50	5.50
Capric acid, commercial, pure, tank delivery	Cents per pound	68.33	76.33	83.00	86.75	92.00
Capryl alcohol, secondary, 98-percent, tank, f.o.b. works	Cents per pound	42.00	43.00	48.00	48.00	48.00
Caprylic acid, commercial, pure, tanks	Cents per pound	72.83	78.33	83.00	90.92	102.00
Carboxymethyl cellulose (CMC), technical, 96-percent minimum, low or medium viscosity, bags, 24,000 pounds, f.o.b. Hopewell, VA	Dollars per pound	1.16	1.39	1.55	1.55	1.55
Carnauba wax, Parnahyba, No. 1, yellow, bags, ton lots	Dollars per pound	2.50	2.50	2.88	3.23	3.50
b-Carotene, tablet grade powder, 10-percent	Dollars per kilogram	70.00	72.51	73.33	81.00	86.00
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
Cedarwood oil, Chinese, drums, cans	Dollars per pound	1.69	1.50	1.55	1.66	1.70
Cellulose acetate, powdered, bags, truckload, delivered east	Dollars per pound	1.50	1.58	1.62	1.94	2.12
Cod oil, refined, bulk, f.o.b. Gloucester, MA	Cents per pound	31.50	36.00	36.00	37.25	39.00
Corn syrup, 42 DE, tanks, f.o.b. works	Cents per pound	11.22	11.64	12.90	12.90	12.90
Cube root, powdered, 5-percent-rotenone basis, 50-pound bags, truckload, works	Dollars per pound	0.60	0.60	1.30	1.30	1.30
Denatured alcohol, ethyl (ethanol), CD18, CD19, tanks, delivered east	Dollars per gallon	2.09	2.11	2.08	2.02	2.02
Dextrin, corn, canary dark, paper bags, carload, works	Cents per pound	31.01	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
Dibutyl sebacate, tanks, works	Dollars per pound	1.74	1.79	1.79	1.79	1.79
Diglycol laurate, drums, ton lots	Cents per pound	32.50	32.50	32.50	32.50	3.50
Diglycol stearate, 500-pound drums, truckload	Cents per pound	62.00	62.00	62.00	62.00	62.00
Ethyl vanillin, 25-pound drums, 500 pounds or more	Dollars per pound	13.94	14.50	14.56	14.75	14.75
Fir oil, Canada, drums	Dollars per pound	9.75	9.75	9.75	10.94	12.08
Fructose, crystallized, dry, 50-pound bags, truckload, f.o.b. plant	Cents per pound	90.00	60.25	68.75	39.00	39.00
Furfural, tanks, f.o.b. plant	Cents per pound	75.00	77.33	79.00	79.00	79.00
Gelatin, edible, 100 AOAC test, drums, less truckload, delivered	Dollars per pound	1.50	1.50	1.54	1.68	1.70
Glue, bone, extracted, green, 85 jellygrams, bags, carload	Cents per pound	95.00	95.00	95.00	94.00	89.00
Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks, delivered	Cents per pound	79.00	75.92	64.00	56.63	64.08

See footnotes and definitions at end of table.

--Continued

Table 27--Selected prices for biobased chemicals and derivatives 1/--continued

Item	Unit	Average annual price 2/				
		1989	1990	1991	1992	1993
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
Juniperberry oil, Italian	Dollars per kilogram	95.00	91.83	179.25	228.83	264.00
Karaya gum, No. 1, powdered, drums	Dollars per pound	3.50	3.31	3.25	3.25	3.25
Lactic acid, technical, 88-percent, tankcar, freight equaled	Cents per pound	1.03	1.03	1.03	1.03	1.03
Lanolin, anhydrous, pharmaceutical, 400-pounds drums, works	Dollars per pound	0.90	1.01	1.00	1.25	1.25
Lauric acid, commercial, pure, bags, truckload	Cents per pound	57.67	62.50	57.25	62.38	65.00
Lecithin, unbleached, bulk, less carload, works	Cents per pound	37.00	35.00	29.00	28.00	25.75
Locust bean gum, powdered, bags	Dollars per pound	4.75	4.75	4.75	4.75	4.63
Menhaden oil, bulk, Gulf ports	Cents per pound	11.33	10.94	13.13	15.83	16.54
Menthol, natural, Chinese, drums	Dollars per kilogram	24.50	24.02	18.68	19.45	11.20
Myristic acid, commercial, pure, bags, truckload	Dollars per pound	0.88	0.79	0.67	1.10	1.25
Neatsfoot oil, 20 degrees F, drums, truckload, f.o.b. Philadelphia	Cents per pound	54.00	62.00	70.00	70.83	65.63
1-Octadecanol, synthetic, tanks, f.o.b.	Cents per pound	76.17	92.50	92.50	92.50	92.50
Oiticica oil, liquid, drums	Cents per pound	47.17	48.50	51.00	75.08	80.83
Oleic acid, double distilled (white), tanks	Cents per pound	54.00	54.00	54.00	54.00	60.42
Pectin, high methoxyl	Dollars per pound	3.30	3.30	3.30	4.03	4.75
Pelargonic acid, synthetic, tanks, f.o.b., freight allowed	Cents per pound	97.00	97.00	97.00	97.00	103.50
Pine oil, 80-percent minimum alcohol content, bulk, f.o.b. works	Cents per pound	60.50	68.33	72.00	72.00	76.67
Pyrethrum, purified, 20-percent pyrethrins, drums, works	Dollars per pound	37.50	37.50	37.00	37.00	37.00
Quinine hydrochloride, National Formulary, 1,000-ounce drums, 2,000 ounces or more	Dollars per ounce	2.33	2.30	2.30	2.37	2.50
Quinine sulfate, U.S. Pharmacopeia XVIII, 1,000-ounce drums, 2,000-ounces or more	Dollars per ounce	2.33	2.12	2.10	2.17	2.30
Rose oil, natural, National Formulary, Bulgarian otto, bottles	Dollars per kilogram	7,575	7,600	5,308	5,060	5,060
Rotenone resin, 30-45 percent, 100-pound drums, works	Cents per pound	38.00	38.00	51.00	51.00	51.00
Sandalwood oil, East Indian	Dollars per kilogram	169.58	170.00	197.08	181.67	248.72
Sebacic acid, chemically pure, bags, carload, works	Dollars per pound	1.98	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
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
Stearic acid, single pressed, bulk	Cents per pound	37.00	38.17	36.00	37.42	44.00
Sucrose, refined, white, bags, carload, f.o.b. refinery, east	Cents per pound	35.28	36.00	36.00	36.00	36.00
Sucrose acetate isobutyrate, 90-percent, drums, truckload, delivered	Dollars per pound	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
Tall oil, crude, Southeast, tanks, works, freight equaled	Dollars per ton	140.00	135.42	159.17	150.83	119.17
Tallow fatty acids, technical, tanks, delivered	Cents per pound	29.00	29.00	24.88	23.50	23.50
Tannic acid, National Formulary, fluffy, barrels, 1,000-pound lots	Dollars per pound	6.09	6.09	6.09	6.09	6.09
Tragacanth gum, No. 1, ribbons, 100-pound drums	Dollars per pound	36.00	36.00	36.00	36.00	36.83
Turpentine, crude sulfate, tanks, f.o.b. Southeast works	Dollars per gallon	2.05	1.75	1.36	0.88	0.68
Undecylenic acid, 425-pound drums, 5,000 pounds or more, f.o.b. works	Dollars per pound	3.00	3.30	3.30	3.30	3.30
Vanillin, U.S. Pharmacopeia, drums, f.o.b. works	Dollars per pound	7.08	7.25	7.30	7.30	6.90
Xanthan gum, food grade, 100-pound drums, f.o.b. works	Dollars per pound	5.65	5.65	5.65	5.65	5.74

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 a range.

Chemical definitions:

Aluminum stearate is made by reacting aluminum salts with stearic acid for use in paints and varnishes, lubricants and greases, cosmetics, pharmaceuticals, and as a waterproofing agent and cement additive.

Anise seed oil is distilled from anise seed for use in perfumes, flavors, licorice candies, and color photography.

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.

Bacitracin is produced by *Bacillus subtilis* for use as an antibacterial agent and feed supplement.

Bay oil is an essential oil obtained from bay leaves for use in fragrances and flavors.

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

Bergamot oil is an essential oil used in perfumes.

Butyl oleate is obtained by alcoholysis of olein or esterification of oleic acid with butanol for use in coatings, polishes, and water-proofing compounds, and as a plasticizer for polyvinyl chloride.

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.

Calcium gluconate is made by the neutralization of gluconic acid, a glucose derivative, with lime for use in vitamin tablets and as a buffer and sequestering agent.

Camphor is obtained by steam distilling camphor tree (*Cinnamomum camphora*) wood for use in medicines, insecticides, and moth and mildew proofings, and as a plasticizer for cellulose nitrate.

Capric acid is a fatty acid obtained from coconut oil that is used as a base for wetting agents and intermediate chemicals.

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.

Carboxymethylcellulose is produced by reacting cellulose with sodium chloroacetate for food, cosmetics, paper products, and drilling muds.

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.

b-Carotene is extracted from carrots and palm-oil concentration for pharmaceuticals, butter and margarine coloring, and a feed and food additive.

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

Cedarwood oil is an essential oil distilled from *Juniperus virginiana* for perfumes.

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

Corn syrup is made by hydrolysis of cornstarch for use as a sweetener, thickener, or bodying agent in soft drinks.

Cube root contains rotenone, which is used in insecticides, flea powders, fly sprays, and moth-proofing agents.

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.

Dibutyl sebacate is a sebacic acid ester used in dielectric liquid, cosmetics, and perfumes, and as a plasticizer and rubber softener.

Diglycol laurate is a lauric acid ester used to size and finish textiles, paper, and leather, and as an emulsifying agent for oils and hydrocarbon solvents.

Diglycol stearate is a stearic acid ester used as a emulsifying agent for oils, solvents, and waxes, and a lubricating agent for paper and cardboard.

Ethyl vanillin is chemically modified vanillin from lignin for food flavoring.

Fir oil is steam distilled from *Picea nigra* for perfumes.

Fructose is derived from beet sugar or cornstarch for foods and medicines.

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

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.

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

Guar gum is a water-soluble plant mucilage used in paper coatings, cosmetics, and pharmaceuticals, and as a food thickener and emulsifier.

Juniperberry oil is obtained from the dried fruit of juniper trees for use in gin, liqueurs, and medicines.

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.

Lactic acid is obtained by fermenting starch, whey, molasses, etc. for use in cultured dairy products, plasticizers, adhesives, pharmaceuticals, and in dyeing wool.

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

Lauric acid is the major fatty acid in coconut oil (45 to 50 percent), which is used in alkyd resins, wetting agents, soaps, detergents, and cosmetics.

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

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

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

Menthol is derived by freezing peppermint oil or hydrogenation of thymol for perfumes, cigarettes, liquors, and chewing gum.

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

Neatsfoot oil is extracted from the feet/hoofs of slaughtered animals for specialty leather dressings.

1-Octadecanol is made by the reduction of stearic acid for perfumes, cosmetics, intermediate chemicals, surfactants, lubricants, and resins.

Oiticica oil is expressed from seeds of the Brazilian oiticica tree for use as a drying oil in paints and varnishes.

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

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

Pelargonic acid is obtained by oxidation of nonyl alcohol or nonyl aldehyde or oxidative cleavage of erucic acid, the dominant fatty acid in crambe and industrial rapeseed oils, for use in lacquers, plastics, pharmaceuticals, synthetic flavors and odors, and flotation agents.

Pine oil is obtained by steam distillation from pine stumps or synthesized from turpentine for household cleansers, coated paper, mineral flotation, and perfume.

Pyrethrum is extracted from chrysanthemum flowers native to Kenya, Ecuador, and Japan for use in household insecticides.

Quinine hydrochloride and quinine sulfate are obtained from cinchona bark for use as an antimalarial agent in medicine and a flavoring in carbonated beverages.

Rose oil is an essential oil from roses used in perfumes and flavorings.

Rotenone resin is extracted from derris and cube root for insecticides, flea powders, fly sprays, and moth-proofing agents.

Sandalwood oil is an essential oil used in fragrances, perfumes, and flavorings.

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.

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

Stearic acid is obtained by hydrogenation of oils and fats for lubricating greases, soaps, and lubricants.

Sucrose is obtained from sugar beets and sugarcane for use in foods, soft drinks, pharmaceuticals, and chemical intermediates for detergents.

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.

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

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

Tannic acid is extracted from powdered nutgalls with water and alcohol for use in chemicals, tanning, textile mordants and fixatives, and electroplating.

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

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

Undecylenic acid is made by destructive distillation of castor oil for perfumes, flavorings, plastics, plasticizers, and lubricant additive.

Vanillin is extracted from vanilla bean or derived from lignin for use in perfumes, flavorings, and pharmaceuticals.

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