GAINS IN CHEMICAL OUTPUT CONTINUE

PRODUCTION growth in European countries was better than that in other major nations

PRODUCTION GREW among the major chemical-producing countries in 2006, as worldwide economies maintained their increases of the past several years.

The European Chemical Industry Council (CEFIC), which follows the European region as a whole rather than individual countries, notes that chemical production, excluding pharmaceuticals, grew by 1.9% in the region. This was better than growth that occurred in 2005 and above the long-term average, the trade association says.

CEFIC notes that the performance of the chemical industry, excluding drugs, is particularly gratifying, because the inclusion of pharmaceuticals tends to skew the results. In 2006, pharmaceutical output grew 7.1%.

If there was a surprise, it was that many European countries saw production increases rising more than those of most of the other major producing nations. Among seven major European chemical-producing countries, the Netherlands and Spain showed the strongest growth, with output, including pharmaceuticals, rising 6.5%. They were followed by Germany, with a 4.3% increase; Belgium, 3.5%; Italy, 2.2%; and the U.K, 1.3%. Production in France was unchanged from 2005.

In the U.S., total chemical output rose 2.1%, according to Federal Reserve Board indexes. This number trailed the percentage increases for all manufacturing, which rose 5.0% in 2006, and for nondurable manufacturing, which was up 2.2%.

Among the chemical sectors, basic inorganic chemicals showed the best growth, rising 4.1%. This is well ahead of the sector's 10-year average annual growth of just 0.8%. Within this sector, output of synthetic dyes and pigments jumped 13.8%.

Production of the other basic category, organic chemicals, grew just 1.6%. This sector's major chemical industry customer, synthetic materials, produced just 0.5% more in 2006 than in the prior year, with plastic materials and resins up 1.8%, and artificial and synthetic fibers down 10.2%.

For both basic inorganics and organics in the U.S., comparisons with 2005 results are somewhat skewed by the effects of the 2005 Gulf Coast hurricanes, which caused production declines in that year for both sectors.

Perhaps the surprise in the U.S. chemical industry in 2006 compared with the prior year was a 0.3% decline in the production index for pharmaceuticals and medicines. As modest as the decrease was, government data indicate this is the first time since 1975 that this sector has contracted.

Canada is another country where chemicals outperformed pharmaceuticals. In Canada, total chemical production grew by 1.3% from 2005, according to data provided by Statistics Canada. Among the sectors, basic chemicals increased its output by 3.2%, which was greater than the 2.9% growth in production of pharmaceuticals and medicines.

In Asia, Japan's chemical production index in 2006 fell 0.8% from the previous year, according to data from the Ministry of Trade, Economy & Industry. All of the indexes for that country's chemical output were lower than in the year before. Organic chemicals were down 3.3%; cyclic intermediates and dyes, 3.1%; sodium chemicals, 2.6%; fertilizers, 2.3%; petrochemicals, 2.1%; industrial inorganic chemicals and dyes, 1.3%; synthetic rubber, 1.2%; plastics, 0.5%; and aromatics, 0.1%.

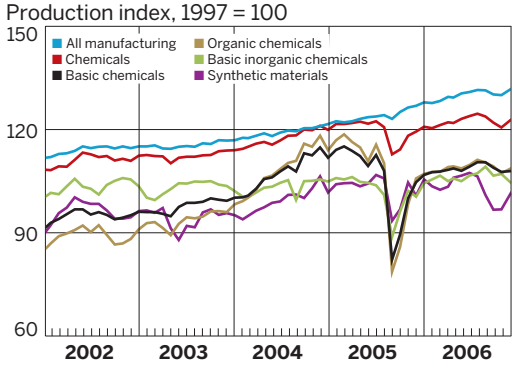
Meanwhile, in South Korea, total chemical production was up 3.5%, while output of rubber and plastic products increased 5.4%, data from the Korea National Statistical Office show. Ethylene production, which sports a 10-year average annual growth of 4.3%, stagnated.

Taiwan's production measures, as reported by the Ministry of Economic Affairs, were mixed. Output of all chemicals declined 2.0%, but production of basic chemicals soared 17.0%. The next best growth was for synthetic rubber, increasing by 4.0%. Also improving were plastics and resins, up 1.1%, and fertilizers, up 1.3%. Output of petrochemicals fell 0.1%, while production of man-made fibers, which has declined for the past two years, dropped 4.3%. Since 2004, output of man-made fibers has fallen 14.9%.

As usual, China released few numbers to the public on a timely basis, but the numbers it supplied for organic chemicals were strong. Production of ethylene, the country's largest volume chemical, was up 16.0%. Refined methanol jumped 42.3%, caprolactam rose 36.0%, and benzene increased 12.4%.

U.S. PRODUCTION

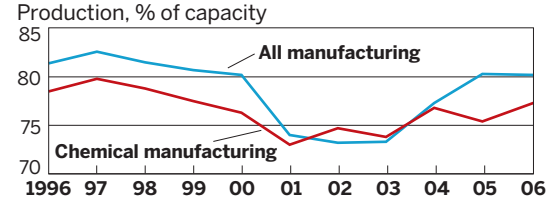
Output rose for all but synthetic materials



NOTE: Seasonally adjusted. **SOURCE:** Federal Reserve Board

U.S. PLANT USE

In 2006, chemical capacity use recovered from the effects of 2005 hurricanes



NOTE: As of December. **SOURCE:** Federal Reserve Board

U.S. PRODUCTION INDEX

Twelve of 15 major chemical categories increased output

PRODUCTION INDEX, 1997 = 100	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	ANNUAL CHANGE 2005-06	ANNUAL CHANGE 1996-06
Total index	**93.3**	**100.0**	**106.1**	**111.1**	**116.1**	**112.1**	**112.1**	**113.3**	**116.1**	**119.9**	**124.7**	**4.0%**	**2.9%**
All manufacturing	**92.2**	**100.0**	**106.9**	**112.9**	**118.5**	**113.7**	**114.0**	**115.4**	**118.9**	**123.7**	**129.9**	**5.0**	**3.5**
Nondurable manufacturing	**96.4**	**100.0**	**101.5**	**102.2**	**102.8**	**99.4**	**100.4**	**100.6**	**102.5**	**104.9**	**107.2**	**2.2**	**1.1**
Chemicals	**94.4**	**100.0**	**101.7**	**103.7**	**105.3**	**103.4**	**110.8**	**112.4**	**117.1**	**119.7**	**122.2**	**2.1**	**2.6**
Basic chemicals	**93.0**	**100.0**	**96.6**	**101.4**	**97.9**	**88.1**	**94.8**	**97.6**	**106.8**	**106.1**	**108.5**	**2.2**	**1.6**
Basic inorganic chemicals	**98.0**	**100.0**	**104.1**	**105.8**	**98.3**	**94.2**	**103.3**	**103.2**	**103.0**	**102.0**	**106.2**	**4.1**	**0.8**
Alkalies & chlorine	109.3	100.0	98.8	129.0	119.2	100.3	159.7	150.3	173.9	181.4	181.0	-0.2	5.2
Synthetic dyes & pigments	95.5	100.0	98.7	95.3	98.2	91.1	103.8	103.1	98.0	102.4	116.6	13.8	2.0
Other basic inorganic chemicals	96.6	100.0	104.1	109.8	99.8	95.5	101.5	98.8	100.2	98.3	100.5	2.3	0.4
Organic chemicals	**89.9**	**100.0**	**91.5**	**98.4**	**97.2**	**83.9**	**88.9**	**93.5**	**107.6**	**107.2**	**108.8**	**1.6**	**1.9**
Synthetic materials (a)	**94.1**	**100.0**	**104.3**	**105.2**	**103.3**	**93.2**	**95.9**	**94.3**	**98.9**	**102.6**	**103.1**	**0.5**	**0.9**
Plastic materials & resins	90.8	100.0	108.2	112.3	111.4	101.1	106.5	102.6	110.3	115.2	117.3	1.8	2.6
Artificial & synthetic fibers	105.8	100.0	100.6	90.8	84.7	78.7	69.8	73.1	70.3	72.0	64.7	-10.2	-4.8
Chemical products	**94.7**	**100.0**	**105.0**	**106.5**	**110.4**	**116.2**	**127.0**	**129.0**	**133.0**	**137.6**	**140.3**	**1.9**	**4.0**
Pharmaceuticals & medicines	94.9	100.0	108.8	113.1	117.6	126.6	136.6	141.3	142.1	144.7	144.3	-0.3	4.3
Soap, cleaning compounds & toiletries	94.5	100.0	98.5	94.6	97.6	99.3	113.0	108.8	121.8	131.9	143.5	8.8	4.3
Paint & coatings	99.3	100.0	100.2	98.3	98.0	95.8	96.0	94.8	100.5	101.0	104.0	3.1	0.5
Pesticides, fertilizers & other agricultural chemicals	**96.4**	**100.0**	**102.1**	**92.0**	**86.9**	**79.9**	**82.7**	**86.4**	**90.7**	**95.6**	**96.4**	**0.8**	**0.0**

a Includes synthetic rubber. **SOURCE:** Federal Reserve Board

CANADA PRODUCTION INDEX

Chemicals outperformed all Canadian manufacturing

PRODUCTION INDEX, 1997 = 100	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	ANNUAL CHANGE 2005-06	ANNUAL CHANGE 1996-06
All manufacturing	**93.9**	**100.0**	**105.0**	**113.5**	**126.2**	**120.0**	**121.0**	**120.5**	**123.0**	**124.1**	**123.0**	**-0.9%**	**2.7%**
Chemicals	**99.8**	**100.0**	**100.9**	**105.1**	**116.8**	**119.5**	**124.7**	**129.5**	**135.4**	**136.6**	**138.4**	**1.3**	**3.3**
Basic chemicals	93.0	100.0	98.2	97.8	112.5	112.4	111.1	113.1	121.9	123.2	127.1	3.2	3.2
Pharmaceuticals & medicines	96.6	100.0	95.3	111.2	133.8	174.4	199.5	207.6	202.0	197.4	203.1	2.9	7.7

SOURCE: Statistics Canada

EUROPE PRODUCTION INDEX

The Netherlands and Spain showed strong growth

CHEMICAL PRODUCTION INDEX, 1997 = 100	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	ANNUAL CHANGE 2005-06	ANNUAL CHANGE 1996-06
Belgium	90.2	100.0	101.2	108.1	119.9	116.5	127.2	127.0	131.3	135.0	139.7	3.5%	4.5%
France	96.2	100.0	105.1	107.5	112.5	109.9	108.7	107.5	108.1	109.9	109.9	0.0	1.3
Germany	94.4	100.0	100.2	104.5	107.5	104.9	107.5	107.5	109.0	113.4	118.3	4.3	2.3
Italy	96.6	100.0	100.2	100.4	101.8	99.2	100.5	104.9	107.1	108.4	110.8	2.2	1.4
Netherlands	95.6	100.0	100.0	107.0	116.0	117.0	124.0	124.0	124.0	126.1	134.3	6.5	3.5
Spain	93.5	100.0	103.6	107.7	106.2	107.1	110.3	113.5	116.1	119.0	126.7	6.5	3.1
U.K.	98.2	100.0	101.6	104.9	109.3	113.2	112.3	112.9	117.8	118.6	120.1	1.3	2.0

SOURCES: European Chemistry Industry Council, national associations

ASIA PRODUCTION INDEX

Chemicals trailed manufacturing in Japan and Taiwan

PRODUCTION INDEX, 1997 = 100	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	ANNUAL CHANGE 2005-06	ANNUAL CHANGE 1996-06
JAPAN													
Mining & manufacturing	**96.5**	**100.0**	**92.9**	**93.6**	**99.1**	**94.1**	**90.1**	**93.0**	**98.1**	**99.2**	**104.0**	**4.8%**	**0.8%**
All chemicals (a)	**95.7**	**100.0**	**94.9**	**98.3**	**98.9**	**95.8**	**95.8**	**97.3**	**98.7**	**99.3**	**98.5**	**-0.8**	**0.3**
Petrochemicals	94.5	100.0	94.5	99.3	99.1	94.5	95.5	98.4	101.0	102.0	99.9	-2.1	0.5
Aromatics	85.5	100.0	93.9	100.9	100.1	97.7	100.8	106.5	109.9	115.0	114.9	-0.1	3.0
Industrial sodium chemicals	95.7	100.0	95.7	97.2	98.2	91.0	92.6	93.8	93.8	94.6	92.1	-2.6	-0.4
Inorganic chemicals & dyes	96.8	100.0	97.7	103.3	106.8	101.8	103.9	106.3	108.8	110.1	108.7	-1.3	1.2
Organic chemicals	93.2	100.0	96.6	101.9	100.6	94.3	94.6	100.0	100.7	102.1	98.7	-3.3	0.6
Cyclic intermediates & dyes	96.8	100.0	95.1	98.2	97.7	93.9	95.6	96.6	98.9	96.0	93.1	-3.1	-0.4
Plastics	**89.8**	**100.0**	**92.2**	**94.8**	**96.4**	**91.0**	**91.0**	**91.4**	**94.3**	**94.3**	**93.8**	**-0.5**	**0.4**
Synthetic rubber	**95.5**	**100.0**	**95.5**	**99.1**	**99.9**	**92.0**	**96.1**	**99.6**	**102.1**	**102.7**	**101.5**	**-1.2**	**0.6**
Fertilizers	**101.8**	**100.0**	**90.9**	**88.1**	**87.1**	**80.6**	**75.0**	**69.5**	**69.8**	**68.5**	**67.0**	**-2.3**	**-4.1**
SOUTH KOREA													
All manufacturing	**95.9**	**100.0**	**93.4**	**116.8**	**136.8**	**137.1**	**148.3**	**156.0**	**172.4**	**183.3**	**202.6**	**10.5%**	**7.8%**
Chemicals & chemical products	**89.0**	**100.0**	**96.6**	**106.6**	**113.0**	**116.0**	**123.4**	**128.1**	**134.5**	**138.6**	**143.5**	**3.5**	**4.9**
Rubber & plastic products	98.1	100.0	79.2	93.1	99.4	101.9	108.5	111.3	115.0	117.3	123.7	5.4	2.3
TAIWAN													
All manufacturing	**93.3**	**100.0**	**103.2**	**111.2**	**120.2**	**110.1**	**120.4**	**129.4**	**143.2**	**148.7**	**157.1**	**5.6%**	**5.4%**
Chemicals	**93.8**	**100.0**	**102.9**	**112.6**	**120.5**	**129.4**	**121.9**	**133.4**	**146.8**	**147.9**	**144.9**	**-2.0**	**4.4**
Basic chemicals	95.9	100.0	98.9	107.5	120.9	123.5	125.4	133.5	150.1	151.1	176.8	17.0	6.3
Petrochemicals	95.5	100.0	101.2	118.5	133.4	163.8	175.4	197.8	213.6	228.0	227.6	-0.1	9.1
Fertilizers	96.5	100.0	92.3	85.0	83.0	77.5	74.2	73.8	71.4	76.6	77.6	1.3	-2.2
Man-made fibers	91.1	100.0	105.5	107.6	111.8	107.7	115.1	115.0	116.8	103.9	99.4	-4.3	0.9
Plastics & resins	95.1	100.0	103.3	113.2	117.8	118.0	125.3	129.4	137.0	134.3	135.7	1.1	3.6
Synthetic rubber	80.3	100.0	103.3	109.0	102.4	105.5	115.8	120.9	129.1	127.7	132.8	4.0	5.2

a Excludes pharmaceuticals.
SOURCES: Japan Ministry of Economy, Trade & Industry; Korea National Statistical Office, South Korea; Taiwan Ministry of Economic Affairs, Department of Statistics

U.S. ORGANICS

Ethylene oxide increased nearly 9%, as others grew only modestly or declined

THOUSANDS OF METRIC TONS UNLESS OTHERWISE NOTED	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	ANNUAL CHANGE 2005-06	ANNUAL CHANGE 1996-06
Acrylonitrile	1,530	1,493	1,415	1,415	1,551	1,343	1,239	1,501	1,598	1,323	1,358	2.6%	-1.2%
Aniline	489	607	701	719	846	865	921	969	1,034	964	930	-3.6	6.6
Benzene (thousands of liters) (a,b)	8,009	8,865	8,467	9,088	9,156	7,271	8,130	7,926	8,781	7,574	7,642	0.9	-0.5
1,3-Butadiene (c)	1,744	1,863	1,844	1,942	2,009	1,721	1,869	1,902	2,204	2,046	1,836	-10.3	0.5
Cumene	2,667	2,776	3,045	3,162	3,741	3,187	3,503	3,397	3,736	3,509	3,559	1.4	2.9
Ethylbenzene	4,699	5,432	5,743	5,945	5,968	4,642	5,412	5,578	5,779	5,251	5,286	0.7	1.2
Ethylene	22,270	23,169	23,615	25,300	25,113	22,513	23,644	22,976	25,682	23,974	25,020	4.4	1.2
Ethylene dichloride	5,142	11,927	11,140	10,358	9,911	9,336	9,328	9,994	12,163	11,308	9,732	-13.9	6.6
Ethylene oxide	3,284	3,738	3,692	4,030	3,867	3,343	3,447	3,660	3,772	3,166	3,445	8.8	0.5
Propylene (d)	11,390	12,489	13,014	13,202	14,457	13,176	14,425	13,939	15,345	15,490	15,650	1.0	3.2
Styrene	5,386	5,156	5,166	5,397	5,405	4,214	4,899	5,167	5,394	5,042	4,827	-4.3	-1.1
Urea	7,755	7,533	8,042	8,080	6,969	6,080	7,038	5,783	5,756	5,267	5,431	3.1	-3.5
Vinyl acetate	1,322	1,331	1,333	1,378	1,497	1,188	1,349	1,306	1,431	1,327	1,315	-0.9	-0.1

a Tar distillers and coke-oven operators not included. **b** Specification grades. **c** Rubber grade. **d** All grades.
SOURCES: National Petroleum Refiners Association, Bureau of the Census

CANADA ORGANICS

Results were mixed for those products with available data

THOUSANDS OF METRIC TONS	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	ANNUAL CHANGE 2005-06	ANNUAL CHANGE 1996-06
Benzene	758	715	718	805	859	751	849	843	915	798	743	-6.9%	-0.2%
Butadiene	212	219	236	230	252	245	276	276	289	246	262	6.5	2.1
Ethylene	3,202	3,244	3,557	3,881	4,069	4,261	4,734	4,729	5,095	na	na	na	na
Formaldehyde	195	210	228	211	194	179	212	245	269	na	236	na	1.9
Propylene	822	859	1,038	1,000	934	882	956	938	939	737	833	13.0	0.1
Toluene	303	321	222	260	218	222	256	289	na	na	253	na	-1.8
Urea	3,281	3,470	3,714	3,783	3,887	3,363	3,436	3,311	3,654	3,549	na	na	na
Xylenes	384	362	308	253	312	271	294	336	351	na	na	na	na

na = not available. **SOURCE:** Statistics Canada

EUROPE ORGANICS

Production of most organic chemicals declined

THOUSANDS OF METRIC TONS	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006 (a)	ANNUAL CHANGE 2005-06
Acetic acid	589	781	584	593	754	495	716	676	1,451	1,500	1,050	-30.0%
Acetone	992	1,173	1,254	1,307	1,325	404	1,011	1,235	1,567	1,336	1,696	26.9
Benzene	3,617	3,561	3,345	3,705	4,565	6,670	6,817	6,535	7,931	7,089	6,050	-14.7
Butadiene	1,906	1,939	1,971	2,027	2,097	1,992	2,024	2,131	2,222	2,233	2,182	-2.3
1-Butanol	140	164	188	44	67	531	575	542	788	816	650	-20.3
Ethylbenzene	na	679	684	937	149	1,180	769	911	4,262	4,276	3,730	-12.8
Ethylene	17,748	18,537	18,980	19,362	19,444	19,674	20,159	20,686	21,408	21,600	21,192	-1.9
Ethylene dichloride	413	902	860	1,056	1,122	2,759	3,358	3,374	6,044	6,646	5,538	-16.7
Ethylene glycol	365	506	1,171	1,177	1,195	268	239	857	1,404	1,637	1,495	-8.7
Ethylene oxide	190	634	644	592	637	934	717	792	2,311	2,397	2,160	-9.9
Formaldehyde	735	808	824	947	954	2,463	3,299	3,295	4,017	4,057	4,174	2.9
Methanol	1,046	2,365	2,242	869	1,148	2,030	1,844	2,009	2,878	3,248	3,165	-2.6
Phenol	951	na	1,391	na	na	689	797	724	2,059	2,005	2,216	10.5
Phthalic anhydride	182	414	446	446	488	371	442	430	848	852	691	-18.9
Propylene	12,037	12,624	12,885	13,153	13,330	13,352	14,107	14,708	15,123	15,406	15,291	-0.7
Propylene glycol	328	361	351	429	443	316	305	329	1,987	2,179	748	-65.7
Propylene oxide	398	819	727	845	908	735	777	861	666	950	1,200	26.3
Styrene	na	3,025	3,152	2,989	3,215	958	3,078	3,215	6,220	4,963	4,660	-6.1
Toluene	1,161	209	1,130	1,172	1,155	886	919	848	1,913	2,014	1,570	-22.0
Vinyl acetate	na	391	469	718	644	457	667	502	881	800	850	6.3
Xylenes	129	1,368	2,514	2,497	2,602	579	1,122	626	4,382	4,282	4,127	-3.6

NOTE: Data from 2002 forward are for 25 countries in the European Union and prior to 2002, for 15 countries. Thus, 10-year comparisons are not meaningful. **a** C&EN estimates based on partial reporting. **na** = not available. **SOURCES:** European Union and national government statistics offices, Association of Petrochemicals Producers in Europe

CHINA ORGANICS

Ethylene production increased by more than 1 million metric tons

THOUSANDS OF METRIC TONS	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	ANNUAL CHANGE 2005-06	ANNUAL CHANGE 1997-06
Benzene (pure)	1,358	1,341	1,535	1,850	1,988	2,131	2,408	2,556	3,061	3,441	12.4%	10.9%
Caprolactam	100	120	109	164	152	170	201	228	214	291	36.0	12.6
Ethylene	3,585	3,772	4,348	4,743	4,807	5,414	6,118	6,266	7,555	8,765	16.0	10.4
Methanol (refined)	1,743	1,581	1,794	1,967	2,065	2,110	2,989	4,406	5,356	7,623	42.3	17.8

SOURCE: China National Chemical Information Center

ASIA ORGANICS

Production fell sharply for Japanese acrylonitrile, phthalate plasticizers, and phthalic anhydride

THOUSANDS OF METRIC TONS	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	ANNUAL CHANGE 2005-06	ANNUAL CHANGE 1996-06
JAPAN													
Acetic acid	599	620	654	644	675	594	569	592	589	599	597	-0.3%	0.0%
Acetone	417	458	459	507	508	476	472	492	539	546	531	-2.7	2.4
Acrylonitrile	675	730	667	738	732	738	708	780	711	742	667	-10.1	-0.1
Benzene (a)	4,177	4,502	4,203	4,459	4,425	4,261	4,313	4,551	4,758	4,980	4,874	-2.1	1.6
Butadiene	1,025	1,052	977	1,035	1,044	976	993	1,062	1,041	1,040	1,002	-3.7	-0.2
Butanol	415	447	424	495	461	472	476	519	506	513	537	4.7	2.6
Caprolactam	555	556	519	581	599	531	508	530	503	458	467	2.0	-1.7
Cyclohexane	639	721	652	688	673	598	607	685	676	722	731	1.2	1.4
Ethylene	7,138	7,416	7,076	7,687	7,614	7,361	7,152	7,367	7,570	7,618	7,522	-1.3	0.5
Ethylene dichloride	3,116	3,491	3,491	3,503	3,431	3,275	3,352	3,463	3,594	3,687	3,514	-4.7	1.2
Ethylene glycol	751	886	920	922	930	787	733	814	786	841	763	-9.3	0.2
Ethylene oxide	840	952	953	976	990	891	868	939	941	1,005	974	-3.1	1.5
Octanol	331	321	285	315	278	262	302	306	307	279	280	0.4	-1.7
Phenol	768	833	851	888	916	884	891	926	966	938	860	-8.3	1.1
Phthalate plasticizers	484	481	398	417	396	369	377	382	357	315	279	-11.4	-5.4
Phthalic anhydride	342	330	301	301	290	259	262	262	257	239	175	-26.8	-6.5
Polypropylene glycol	296	295	274	302	304	294	299	314	346	339	344	1.5	1.5
Propylene	5,143	5,409	5,101	5,520	5,453	5,342	5,309	5,610	5,767	6,030	6,090	1.0	1.7
Purified terephthalic acid	1,561	1,663	1,616	1,547	1,527	1,496	1,624	1,443	1,531	1,472	1,432	-2.7	-0.9
Styrene	3,085	3,035	2,770	3,055	2,968	3,004	3,016	3,201	3,345	3,392	3,295	-2.9	0.7
Toluene (a)	1,370	1,419	1,349	1,488	1,489	1,423	1,548	1,584	1,634	1,676	1,633	-2.6	1.8
Toluene diisocyanate	166	192	192	192	214	214	223	230	245	216	232	7.4	3.4
Xylene (a)	3,931	4,634	4,340	4,641	4,681	4,798	4,900	5,213	5,395	5,570	5,727	2.8	3.8
p-Xylene	2,329	2,921	2,754	2,969	2,920	2,814	2,920	3,097	3,164	3,358	3,357	-0.0	3.7
SOUTH KOREA													
Benzene	1,407	1,819	2,412	2,572	2,834	2,650	2,852	3,246	3,462	3,594	3,719	3.5%	10.3%
Butadiene	601	658	731	764	808	777	816	860	917	939	948	1.0	4.7
Ethylene	3,968	4,450	5,110	5,216	5,439	5,398	5,636	5,872	5,945	6,058	6,055	-0.1	4.3
Propylene	2,244	2,760	3,247	3,282	3,409	3,273	3,557	3,753	3,892	3,945	4,171	5.7	6.4
Vinyl chloride	709	911	984	1,017	1,133	1,392	1,416	1,441	1,498	1,501	1,521	1.3	7.9
TAIWAN													
Acrylonitrile	180	180	167	175	186	292	339	352	379	386	418	8.3%	8.8%
Benzene	511	506	415	605	690	1,070	931	998	1,088	1,204	1,180	-2.0	8.7
Butadiene	129	130	122	190	220	349	346	390	412	387	394	1.8	11.8
Caprolactam	104	114	123	119	171	184	186	216	216	247	257	4.1	9.5
Dioctyl phthalate	193	274	270	269	198	280	257	243	239	204	211	3.4	0.9
Ethylene	906	959	935	1,296	1,592	2,584	2,393	2,679	2,864	2,890	2,888	-0.1	12.3
Ethylene glycol	194	193	206	301	612	1,036	939	1,169	1,459	1,413	1,343	-5.0	21.3
Propylene	514	553	545	765	930	1,410	1,462	1,752	1,995	2,012	2,105	4.6	15.1
Purified terephthalic acid	2,210	2,345	2,433	2,769	3,140	3,217	3,705	4,079	4,620	4,597	4,400	-4.3	7.1
Styrene	411	464	386	806	956	1,146	1,249	1,274	1,247	1,248	1,222	-2.1	11.5
Toluene	13	43	23	18	26	54	42	64	140	86	30	-65.1	8.7
Vinyl chloride	1,013	927	1,018	1,288	1,410	1,452	1,557	1,718	1,763	1,783	1,609	-9.8	4.7

a Petroleum and nonpetroleum sources. **SOURCES:** Japan Ministry of Economy, Trade & Industry; Korea National Statistical Office, South Korea; Petrochemical Industry Association of Taiwan; Taiwan Ministry of Economic Affairs

U.S. INORGANICS

Only ammonia and sodium chlorate registered increases

THOUSANDS OF METRIC TONS	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006 (a)	ANNUAL CHANGE 2005-06	ANNUAL CHANGE 1996-06
Aluminum sulfate (b)	1,086	1,053	1,058	1,085	976	1,020	1,053	961	971	967	898	-7.1%	-1.9%
Ammonia (c)	16,256	16,227	16,757	15,725	14,339	11,090	12,574	10,466	10,937	10,141	10,359	2.1	-4.4
Ammonium nitrate (d)	7,708	7,804	8,235	6,920	7,237	5,833	6,436	5,733	6,558	7,638	6,301	-17.5	-2.0
Ammonium sulfate (e)	2,414	2,451	2,528	2,357	2,547	2,347	2,671	2,604	2,726	2,636	2,603	-1.2	0.8
Chlorine (f)	11,301	11,720	11,647	12,111	12,698	11,487	11,681	10,359	12,326	10,275	10,248	-0.3	-1.0
Hydrochloric acid (g)	3,733	4,145	4,226	4,081	4,278	3,969	4,037	4,180	5,301	4,618	4,113	-10.9	1.0
Nitric acid, 100% (h)	8,349	8,556	8,422	8,113	7,898	6,416	6,940	6,747	6,466	6,710	6,636	-1.1	-2.3
Phosphoric acid, P_2O_5	11,982	11,935	12,599	12,433	11,330	10,472	11,146	11,324	11,511	11,437	10,704	-6.4	-1.1
Sodium chlorate	600	568	707	742	853	792	721	669	556	523	558	6.6	-0.7
Sodium hydroxide	10,488	9,953	11,894	11,972	10,451	9,811	9,459	8,793	9,618	8,519	7,993	-6.2	-2.7
Sodium sulfate (i)	602	640	571	599	462	513	500	466	469	467	443	-5.2	-3.0
Sulfuric acid (j)	43,327	43,472	44,000	40,594	39,584	36,338	36,062	37,373	38,021	37,147	35,954	-3.2	-1.8

a Preliminary data. **b** Commercial, 17% Al_2O_3; includes production by municipalities. **c** Synthetic anhydrous; excludes by-product ammonia liquor and ammonium sulfate. **d** Original solution. **e** Synthetic and noncoke by-product. **f** Includes quantities liquefied for use, storage, or shipment. **g** Includes anhydrous hydrochloric acid production. **h** Includes unspecified amounts produced but not withdrawn from the system. **i** Anhydrous, high and low purity, and Glauber's salt. **j** Gross (new and fortified).
SOURCES: Department of Commerce, Bureau of the Census

CANADA INORGANICS

Production for many products declined in 2006

THOUSANDS OF METRIC TONS	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	ANNUAL CHANGE 2005-06	ANNUAL CHANGE 1996-06
Aluminum sulfate	172	162	191	205	167	170	176	171	167	175	164	-6.3%	-0.5%
Ammonia	4,682	4,768	4,737	4,889	4,888	4,297	4,501	4,455	4,996	4,607	4,623	0.3	-0.1
Ammonium nitrate	1,059	979	1,000	1,052	1,110	1,174	1,152	1,031	1,096	1,206	1,181	-2.1	1.1
Carbon black	185	205	217	218	229	215	215	205	223	235	225	-4.3	2.0
Chlorine	1,119	1,067	989	1,065	1,079	1,054	1,095	994	1,057	1,004	929	-7.5	-1.8
Hydrochloric acid	147	142	149	157	155	143	151	153	149	142	155	9.2%	0.5%
Hydrogen peroxide	156	179	199	228	237	203	222	226	244	244	na	na	na
Nitric acid	1,039	1,002	935	1,007	1,074	1,054	1,143	1,105	1,219	1,147	1,180	2.9	1.3
Sodium chlorate	926	1,038	1,012	1,048	1,107	1,082	1,055	1,129	1,183	1,169	1,111	-5.0	1.8
Sodium hydroxide	1,154	1,099	1,015	1,082	1,094	1,074	1,111	1,059	1,146	1,119	1,012	-9.6	-1.3
Sulfuric acid	4,278	4,088	4,333	4,194	3,804	3,846	3,887	3,465	3,933	3,743	3,823	2.1	-1.1

na = not available. **SOURCE:** Statistics Canada

JAPAN INORGANICS

Output of chlorine and titanium dioxide contracted by 5% or more

THOUSANDS OF METRIC TONS	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	ANNUAL CHANGE 2005-06	ANNUAL CHANGE 1996-06
Ammonia	1,811	1,836	1,689	1,685	1,715	1,604	1,450	1,291	1,340	1,318	1,328	0.8%	-3.1%
Ammonium sulfate (a)	1,756	1,780	1,618	1,716	1,749	1,585	1,564	1,570	1,526	1,458	1,439	-1.3	-2.0
Carbon black	757	776	723	761	788	742	755	788	804	805	827	2.7	0.9
Chlorine, liquid	894	928	881	875	847	777	754	723	619	601	571	-5.0	-4.4
Hydrochloric acid	2,416	2,539	2,408	2,448	2,494	2,342	2,317	2,363	2,324	2,308	2,326	0.8	-0.4
Hydrogen peroxide	143	141	140	145	151	159	167	176	196	197	221	12.2	4.4
Nitrogen (mcm)	9,314	9,676	9,716	9,855	10,290	10,296	10,455	10,835	11,281	11,435	11,998	4.9	2.6
Oxygen (mcm)	8,904	9,795	9,188	9,534	10,655	10,373	10,720	11,250	11,278	11,371	11,766	3.5	2.8
Sodium hydroxide	4,062	4,391	4,252	4,345	4,471	4,291	4,271	4,369	4,493	4,552	4,453	-2.2	0.9
Sodium silicate	800	795	765	769	720	679	622	596	577	546	541	-0.9	-3.8
Sulfuric acid	6,851	6,828	6,739	6,943	7,059	6,727	6,763	6,534	6,444	6,546	6,843	4.5	-0.0
Titanium dioxide	238	241	251	269	270	257	240	253	253	259	240	-7.3	0.1

a For agricultural and nonagricultural use. **mcm** = millions of cubic meters. **SOURCE:** Ministry of Economy, Trade & Industry

EUROPE INORGANICS

Some inorganics showed growth, but not enough to offset declines of others

THOUSANDS OF METRIC TONS UNLESS OTHERWISE INDICATED	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006 (a)	ANNUAL CHANGE 2005-06
Carbon black	687	1,243	1,386	1,322	1,342	1,059	1,025	1,009	1,468	1,388	1,400	0.9%
Chlorine	8,959	9,386	9,190	9,219	9,697	9,265	9,222	9,525	10,396	10,382	10,296	-0.8
Hydrochloric acid	1,540	1,907	1,830	2,098	2,050	2,608	4,142	3,784	5,165	6,002	5,402	-10.0
Hydrogen (mcm)	1,904	1,883	2,124	2,252	2,196	5,553	7,519	8,962	10,690	11,251	11,577	2.9
Hydrogen peroxide	143	133	248	438	847	372	655	736	1,085	1,123	1,220	8.6
Nitrogen (mcm)	11,398	11,950	10,490	7,422	8,091	12,829	13,942	17,807	22,326	22,457	21,000	-6.5
Oxygen (mcm)	7,044	10,610	4,674	5,592	5,965	12,678	19,026	22,554	27,112	27,824	20,929	-24.8
Phosphoric acid (b)	615	599	526	995	692	2,463	3,921	3,574	4,304	4,257	3,777	-11.3
Sodium carbonate	1,592	1,589	4,998	4,567	4,401	1,451	1,493	3,874	6,609	6,956	7,575	8.9
Sodium hydroxide	5,785	6,197	6,090	5,418	5,780	6,756	9,114	7,937	9,994	9,829	7,655	-22.1
Sodium sulfate	1,930	2,718	2,748	2,237	2,314	1,806	2,951	3,082	3,406	3,565	4,010	12.5
Sulfuric acid (c)	5,795	6,586	6,832	7,109	6,598	8,157	13,835	12,746	16,584	16,609	15,500	-6.7
Titanium oxides	na	na	415	433	538	na	440	419	588	602	663	10.1

NOTE: Data from 2002 forward are for 25 countries in the European Union and prior to 2002, for 15 countries. Thus, 10-year comparisons are not meaningful. **a** C&EN estimates based on partial reporting. **b** As P_2O_5. **c** As SO_3. **mcm** = millions of cubic meters. **na** = not available.
SOURCES: European Union and national government statistics offices, EuroChlor

CHINA INORGANICS

Output of sodium hydroxide jumped sharply, by nearly 22%

THOUSANDS OF METRIC TONS	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	ANNUAL CHANGE 2005-06	1997-06
Hydrochloric acid (31%)	3,843	3,801	3,960	4,454	4,705	4,926	5,276	6,007	6,582	7,306	11.0%	7.4%
Sodium carbonate	7,285	7,368	7,486	9,199	9,144	10,189	11,075	12,668	14,211	15,972	12.4	9.1
Sodium hydroxide	5,483	5,184	5,495	7,123	7,880	8,227	9,399	10,603	12,400	15,118	21.9	11.9
Sulfuric acid	19,460	20,519	21,589	23,888	26,963	29,674	33,191	38,249	44,621	48,603	8.9	10.7

SOURCE: China National Chemical Information Center

U.S. PLASTICS

High-density and linear low-density polyethylene posted gains of more than 7%

THOUSANDS OF METRIC TONS	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	ANNUAL CHANGE 2005-06	1996-06
THERMOPLASTIC RESINS													
Polyethylene													
Low-density (a,b)	3,531	3,489	3,437	3,493	3,436	3,491	3,647	3,540	3,763	3,558	3,564	0.2%	0.1%
Linear low-density (a,b)	2,885	3,124	3,278	3,677	3,607	4,659	5,139	5,052	5,640	5,395	5,777	7.1	7.2
High-density (c)	5,612	5,696	5,862	6,289	6,336	6,933	7,243	7,126	7,960	7,328	7,991	9.1	3.6
Polypropylene (d)	**5,439**	**6,042**	**6,271**	**7,028**	**7,139**	**7,228**	**7,691**	**8,013**	**8,415**	**8,149**	**8,301**	**1.9**	**4.3**
Styrene polymers													
Polystyrene (e)	2,751	2,894	2,829	2,935	3,104	2,773	3,025	2,900	3,062	2,855	2,844	-0.4	0.3
Acrylonitrile-butadiene-styrene & other styrene polymers (d,f)	1,402	1,403	1,503	1,462	1,473	1,294	1,382	1,351	1,466	1,413	1,411	-0.2	0.1
Polyamine, nylon type	**500**	**554**	**583**	**612**	**581**	**517**	**578**	**580**	**608**	**568**	**576**	**1.4**	**1.4**
Polyvinyl chloride & copolymers (d)	**5,997**	**6,388**	**6,578**	**6,764**	**6,551**	**6,467**	**6,939**	**6,669**	**7,251**	**6,921**	**6,767**	**-2.2**	**1.2**
THERMOSETTING RESINS													
Epoxy (g)	300	297	290	298	314	273	297	262	293	276	283	2.5%	-0.6%
Urea & melamine	1,104	1,197	1,302	1,354	1,437	1,379	1,460	1,440	1,504	1,524	1,556	2.1	3.5
Phenolic	1,577	1,694	1,787	1,990	1,974	1,979	2,013	2,015	2,102	2,127	2,263	6.4	3.7

NOTE: Totals are for those products listed and exclude some small-volume plastic; dry-weight basis unless otherwise specified. **a** Density 0.940 and below. **b** Data include Canadian production from 2001. **c** Density above 0.940. **d** Data include Canadian production. **e** Data include Canadian production from 2000. **f** Data include styrene-butadiene copolymers, styrene acrylonitrile, and other styrene-based polymers. **g** Unmodified. **SOURCE:** American Plastics Council

CANADA PLASTICS

Volume of polyethylene climbed, as those of polyesters and polystyrene fell

THOUSANDS OF METRIC TONS	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	ANNUAL CHANGE 2005-06	ANNUAL CHANGE 1996-06
Polyesters, unsaturated	61	71	82	108	120	115	113	139	100	90	81	-10.0%	2.9%
Polyethylene (a)	2,194	2,195	2,283	2,485	2,751	3,035	3,330	3,083	3,587	3,366	3,594	6.8	5.1
Polystyrene (b)	209	181	180	200	203	186	195	183	207	198	195	-1.5	-0.7

a Includes high-, low-, and linear low-density polyethylene. **b** Includes acrylonitrile-butadiene-styrene. **SOURCE:** Statistics Canada

EUROPE PLASTICS

Production remained broadly steady, with synthetic rubber output rising the most

THOUSANDS OF METRIC TONS	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006 (a)	ANNUAL CHANGE 2005-06
Polyethylene	3,000	8,508	9,731	10,223	10,579	11,487	11,599	11,942	13,859	14,529	14,500	-0.2%
Polystyrene	1,044	1,117	1,090	675	331	2,410	2,550	2,540	1,790	1,859	1,860	0.1
Acrylonitrile-butadiene-styrene	604	762	859	971	1,038	466	793	495	811	891	900	1.0
Polyvinyl chloride	4,322	4,792	2,651	3,209	4,893	5,681	6,531	6,694	6,485	6,594	6,600	0.1
Epoxy resins	282	373	334	393	419	215	464	356	633	693	690	-0.4
Polypropylene	na	na	4,158	6,524	6,984	7,526	8,113	8,638	8,950	9,050	9,200	1.7
Polyamides	843	1,652	1,494	766	1,412	1,209	1,833	1,769	2,052	2,119	2,150	1.5
Synthetic rubber	1,946	2,419	2,245	2,239	2,342	2,691	3,250	3,713	4,415	4,170	4,300	3.1

NOTE: Data from 2002 forward are for 25 countries in the European Union and prior to 2002, for 15 countries. Thus, 10-year comparisons are not meaningful. **a** C&EN estimates based on partial reporting. **na** = not available. **SOURCES:** European Union and national government statistics offices, Association of Plastics Manufacturers in Europe

U.S. SYNTHETIC FIBERS

Although all categories declined, cellulosics fell precipitously

THOUSANDS OF METRIC TONS	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	ANNUAL CHANGE 2005-06	ANNUAL CHANGE 1996-06
NONCELLULOSIC FIBERS													
Nylon	1,270	1,286	1,218	1,217	1,215	1,019	1,112	1,115	1,142	1,082	1,023	-5.5%	-2.1%
Olefin	1,162	1,216	1,326	1,395	1,461	1,316	1,397	1,374	1,388	1,404	1,293	-7.8	1.1
Polyester	1,737	1,855	1,768	1,763	1,775	1,464	1,482	1,374	1,465	1,368	1,253	-8.4	-3.2
CELLULOSIC FIBERS													
Acetate (a) & rayon	216	208	166	134	158	103	81	75	67	49	24	-50.5%	-19.6%

a Includes diacetate and triacetate; excludes production for cigarette filters. **SOURCE:** Fiber Economics Bureau

JAPAN SYNTHETIC FIBERS

Polypropylene showed growth, but just barely

THOUSANDS OF METRIC TONS	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	ANNUAL CHANGE 2005-06	ANNUAL CHANGE 1996-06
Man-made (a)	**1,802**	**1,822**	**1,724**	**1,634**	**1,643**	**1,564**	**1,416**	**1,316**	**1,279**	**1,249**	**1,209**	**-3.2%**	**-3.9%**
Polyester (a)	724	731	684	665	665	628	564	528	520	496	483	-2.6	-4.0
Acrylic (b)	388	417	418	372	377	365	358	298	267	261	243	-7.0	-4.6
Polypropylene (a)	100	110	109	109	112	117	114	116	120	125	127	1.4	2.4
Nylon (c)	201	198	180	174	176	163	126	121	121	118	118	0.0	-5.2

a Sum of staple and filament. **b** Staple only. **c** Filament only. **SOURCE:** Ministry of Economy, Trade & Industry

ASIA PLASTICS

Only South Korea posted positive 10-year growth for all categories

THOUSANDS OF METRIC TONS	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	ANNUAL CHANGE 2005-06	ANNUAL CHANGE 1996-06
JAPAN													
Polyethylene	3,313	3,366	3,143	3,369	3,342	3,294	3,176	3,165	3,238	3,240	3,162	-2.4%	-0.5%
Polyethylene terephthalate	1,360	1,398	1,300	1,281	1,308	1,243	1,211	1,076	1,195	1,126	1,110	-1.4	-2.0
Polypropylene	2,730	2,854	2,520	2,626	2,721	2,696	2,641	2,751	2,908	3,063	3,049	-0.5	1.1
Polystyrene	2,178	2,201	1,975	2,037	2,024	1,810	1,837	1,801	1,824	1,734	1,745	0.6	-2.2
Polyvinyl chloride	2,511	2,626	2,457	2,460	2,410	2,195	2,225	2,164	2,153	2,151	2,146	-0.2	-1.6
Epoxy	201	222	204	225	243	192	201	195	215	211	229	8.5	1.3
Phenolic resins	294	303	259	250	262	232	242	261	287	280	284	1.4	-0.3
Polycarbonate	251	292	317	351	354	370	386	409	411	431	413	-4.2	5.1
Synthetic rubber	1,520	1,592	1,520	1,577	1,590	1,466	1,522	1,577	1,616	1,627	1,607	-1.2	0.6
SOUTH KOREA													
Acrylonitrile-butadiene-styrene	560	596	636	784	777	932	1,120	1,143	1,105	980	1,077	9.9%	6.8%
Polyethylene, high-density	1,340	1,549	1,615	1,756	1,706	1,839	1,871	1,925	1,882	1,949	1,935	-0.7	3.7
Polyethylene, low-density	1,256	1,394	1,518	1,642	1,576	1,614	1,624	1,627	1,706	1,744	1,728	-0.9	3.2
Polypropylene	1,738	2,056	2,355	2,440	2,413	2,485	2,622	2,811	2,930	3,013	3,040	0.9	5.8
Polystyrene	1,000	1,104	1,038	1,105	1,212	1,354	1,361	1,427	1,176	1,093	1,009	-7.7	0.1
Polyvinyl chloride	1,005	1,087	1,013	1,170	1,191	1,238	1,244	1,278	1,306	1,184	1,203	1.6	1.8
TAIWAN													
Acrylonitrile-butadiene-styrene	911	979	899	1,016	1,067	985	1,078	1,105	1,166	1215	1,274	4.9%	3.4%
Polyester resin	146	171	175	204	198	204	219	212	185	168	162	-3.6	1.1
Polyethylene, high-density	241	243	273	395	306	510	507	547	537	515	521	1.2	8.0
Polyethylene, low-density	233	235	224	236	273	477	492	536	609	663	597	-10.0	9.9
Polypropylene	448	420	418	517	564	773	830	937	1,020	1,098	1,174	6.9	10.1
Polystyrene	808	780	764	765	711	866	848	858	817	830	713	-14.1	-1.2
Polyurethane resin	127	151	145	157	185	170	189	193	214	195	191	-2.1	4.2
Styrene-butadiene rubber	98	103	107	104	83	81	78	69	108	96	102	6.3	0.4
Polybutadiene rubber	51	55	56	54	50	52	52	54	56	53	50	-5.7	-0.2

SOURCES: Japan Ministry of Economy, Trade & Industry; Korea National Statistical Office, South Korea; Petrochemical Industry Association of Taiwan; Taiwan Ministry of Economic Affairs

EUROPE SYNTHETIC FIBERS

Cellulosics picked up in 2006, but production of other synthetic fibers sagged

THOUSANDS OF METRIC TONS	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005 (a)	2006 (a)	ANNUAL CHANGE 2005-06
Acrylic	677	705	650	614	623	607	620	856	862	589	562	-4.6%
Polyester	895	995	959	909	968	924	909	1,423	1,473	1,005	975	-3.0
Polyamide	632	673	641	595	636	555	549	670	682	676	663	-1.9
Cellulosics	766	722	715	651	627	607	585	609	636	506	570	12.6

NOTE: Database was revised in 2001 and again in 2003. Data for 2003 and 2004 include enlarged European Union and Turkey. **a** Data for 2005 and 2006 include Russia and Confederation of Independent States and exclude Turkey. **SOURCES:** International Rayon & Synthetic Fibers Committee, Fiber Economics Bureau estimates

U.S. FERTILIZERS

Production of ammonium sulfate grew meagerly, while output for all others plunged

THOUSANDS OF METRIC TONS	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	ANNUAL CHANGE 2005-06	ANNUAL CHANGE 1996-2006
NITROGEN PRODUCTS													
Ammonia	14,671	15,160	15,032	14,484	13,438	10,455	11,306	10,475	9,164	8,945	7,209	-19.4%	-6.9%
Ammonium nitrate	2,431	3,012	3,183	3,165	2,873	2,192	2,246	2,142	2,165	2,473	2,045	-17.3	-1.7
Ammonium sulfate	2,330	2,424	2,453	2,517	2,595	2,353	2,405	2,595	2,669	2,676	2,706	1.1	1.5
Urea	4,822	4,989	4,850	5,066	4,742	3,678	4,477	4,443	3,095	3,086	2,284	-26.0	-7.2
Nitrogen solutions	8,178	8,994	8,980	10,136	9,038	9,144	7,985	8,863	7,781	8,062	7,022	-12.9	-1.5
PHOSPHATE PRODUCTS													
Diammonium phosphate	14,155	14,325	14,088	14,528	12,670	10,049	10,825	9,991	10,404	9,988	9,474	-5.1%	-3.9%
Monoammonium phosphate	2,529	3,170	3,624	3,511	4,106	4,087	4,175	4,734	5,328	5,213	4,170	-20.0	5.1
Phosphate rock	40,911	40,890	37,814	38,353	36,088	34,219	29,183	32,327	35,338	35,183	33,127	-5.8	-2.1
Phosphoric acid (P_2O_5)	11,073	11,494	11,264	11,470	10,751	9,406	10,125	10,253	10,530	10,533	9,802	-6.9	-1.2

NOTE: Years ending June 30. Figures are based on Fertilizer Institute surveys and may not represent the entire industry. **SOURCE:** Fertilizer Institute

EUROPE FERTILIZERS

So-so season marked fertilizer industry, with some chemicals up and some down

THOUSANDS OF METRIC TONS	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006 (a)	ANNUAL CHANGE 2005-06
Ammonium nitrate	1,460	1,171	631	897	721	687	1,505	1,168	6,656	6,138	6,400	4.3%
Ammonium sulfate	475	478	585	566	675	1,442	769	832	1,735	1,703	1,450	-14.9
Anhydrous ammonia	2,246	2,291	2,295	2,213	2,078	2,362	9,394	4,752	12,364	13,187	13,590	3.1
Nitric acid	263	266	290	264	153	600	612	2,378	6,581	6,326	6,584	4.1
Urea	113	368	na	600	725	214	947	767	2,407	2,822	2,550	-9.6

NOTE: Data from 2002 forward are for 25 countries in the European Union and prior to 2002, for 15 countries. Thus, 10-year comparisons are not meaningful. **a** C&EN estimates based on partial reporting. **na** = not available. **SOURCES:** European Union, national government statistics offices

GOT A THING FOR DATA?

If you're itching to do your own calculations with all these numbers, let yourself go ... to **www.cen-online.org,** that is, where you can access downloadable versions of these tables, starting on July 16.