CAP WORKING NOTES

THE AGRI-FOOD BUSINESS IN THE COMMUNITY

COMMISSION OF THE EUROPEAN COMMUNITIES
Directorate-general for Agriculture

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N.B. This special issue of the CAP working notes is extracted from the "Panorama of EC industry 1990" (chapter 15), Commission of the European Communities, Directorate-General of the Internal Market and Industrial Affairs.

THE FOOD, DRINK AND TOBACCO INDUSTRY

(NACE 411-429)

Economic importance of the industry in the EC economy

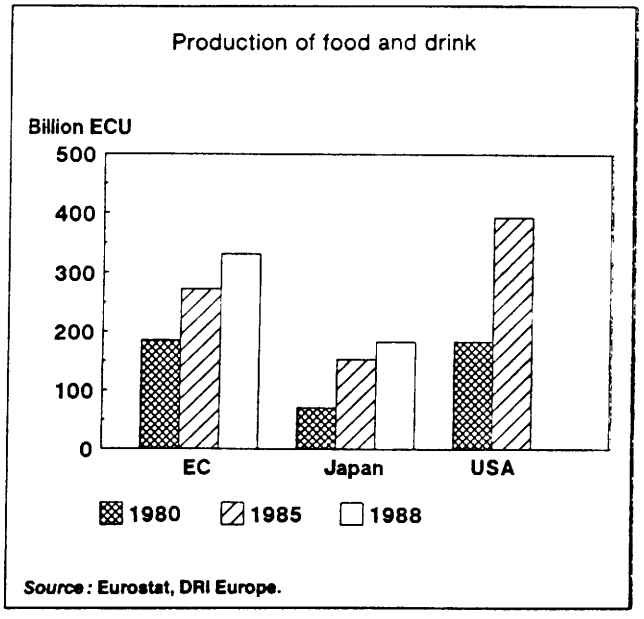
The food and drink industry is one of the leading industries in the Community, employing some 2.2 million people and with a production of ECU 331.3 billion in 1988. The tobacco industry employs 106 000 persons and its production amounts to ECU 36.6 billion in 1988.

Production has followed a positive trend during the 1980s. Between 1985 and 1988, it grew by 21%. Although the EC was the world's largest producer in 1980, the situation has changed, and in 1985 the USA was the leader with ECU 392.8 billion. Japan has also experienced strong growth throughout the 1980s but is still far behind the EC with a production of ECU 182.3 billion in 1988.

The major EC producers of food and drink are also the largest consumer markets: France with 20.4% of total production, the Federal Republic of Germany 19.6%, the United Kingdom 18.9%, Italy 13.8% and Spain 9.7% (the respective shares of those countries in EC GDP being 19.9% for France, 25.4% for the Federal Republic of Germany, 17.1% for the United Kingdom, 17.4% for Italy and 7.2% for Spain).

Employment in the food and drink sector accounted for 2.1% of total EC employment in 1988. The four largest contributors to employment are the United Kingdom which accounts for 22.3% of the total of the industry, the Federal Republic of Germany 19.2%, France 15.9% and Spain 14.4%. The share of the food and drink sector in total employment is higher in smaller countries like Ireland, the Netherlands, Denmark and Spain.

Figure 1



The external balance of trade of the food and drink sector has been positive throughout the 1980s. Its

Table 1
Main indicators, 1980-88 (1)
Food and drink

(million ECU)	1980	1981	1982	1983	1984	1985	1986	1987	1988
Apparent consumption	184 696	199 997	222 416	242 107	262 629	270 122	298 344	308 004	328 225
Net exports (2)	554	3 694	1 709	409	2 007	2 340	2 455	3 289	3 007
Production	185 250	203 691	224 125	242 516	264 636	272 462	300 799	311 293	331 232
Employment (1 000)	2 044	2 023	1 966	1 946	1 936	1 898	2 260	2 232	2 208

(1) 1980 EC 9; 1981-85 EC 10.
(2) 1988 excluding Greece.

Source: Eurostat (Inde, Bise, Comext).

Table 2
Production and external trade

(million ECU)	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Production in current prices										
EC (1)	185 250	203 691	224 125	242 516	264 636	272 462	300 799	311 293	331 232	352 838
Index (2)	69.0	75.1	82.4	88.4	96.6	100.0	98.5	101.9	108.4	115.5
USA (3)	182 651	242 040	284 553	320 452	377 203	392 795	N/A	N/A	N/A	N/A
Index	46.5	61.6	72.4	81.9	96.0	100.0	N/A	N/A	N/A	N/A
Japan (3)	70 455	98 346	103 424	124 277	145 506	152 925	168 159	166 351	182 583	N/A
Index	46.1	64.3	67.6	81.3	95.1	100.0	110.0	108.8	119.4	N/A
Production in constant prices										
EC (1)	244 608	244 518	249 351	260 409	269 636	272 462	304 928	322 946	365 344	341 232
Index (2)	91.6	90.4	91.9	96.1	98.7	100.0	99.8	105.7	119.6	111.7
EC trade in current prices										
Imports extra-EC (1)	13 393	15 003	16 383	17 681	20 065	19 775	17 148	16 549	N/A	N/A
Index (2)	68.3	75.9	82.8	89.4	101.5	100.0	82.2	79.3	N/A	N/A
Exports extra-EC (1)	13 899	18 431	18 089	18 151	21 233	22 315	19 699	19 654	N/A	N/A
Index (2)	63.6	82.6	81.1	81.3	95.2	100.0	83.3	83.1	N/A	N/A
X/M (1)	1.04	1.23	1.10	1.03	1.06	1.13	1.15	1.19	N/A	N/A
Imports intra-EC (1)	21 849	25 683	29 166	31 257	34 908	38 461	40 187	41 501	N/A	N/A
Index (2)	56.8	66.8	75.8	81.3	90.8	100.0	104.5	107.9	N/A	N/A

(1) 1980 EC 9; 1981-85 EC 10.
(2) Taking into account changes in EC membership.
(3) Census of Manufactures and Eurostat estimates.

Source: Eurostat (Inde, Bise).

level fluctuated in the early 1980s but has been steadily increasing since 1984. It stabilized at ECU 3.1 billion in 1988. Since 1985, EC exports and imports have shown a parallel decreasing trend, a little more pronounced for imports, which amounted in 1988 to ECU 16.5 billion, while exports reached ECU 19.6 billion.

Exports originated for the most part from the Netherlands, France and the Federal Republic of Germany. The main importers were the Federal Republic of Germany, the United Kingdom and France.

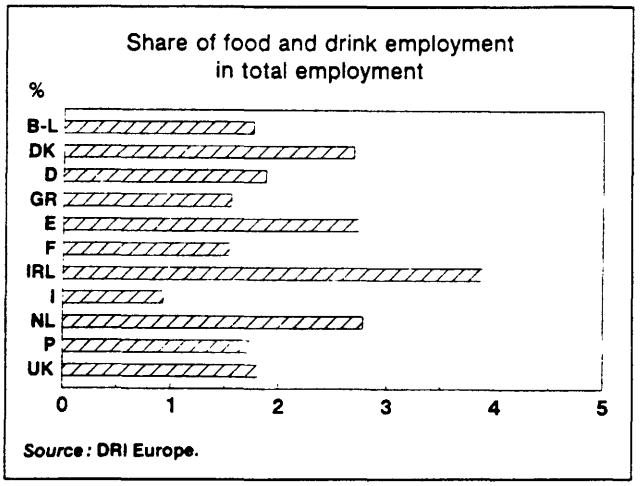
One characteristic of foodstuff is that only a few products are marketed at long or even middle distances. There are many obstacles to marketing far from the place of manufacture: transport and storage costs, the relative fragility of the products, particularly in terms of freshness, adaptation to the

Table 3
Production

(million ECU)	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
EC	210 711	229 328	251 772	270 222	295 282	305 533	300 799	311 293	331 232	352 838
Belgium, Luxembourg	7 853	8 575	9 367	9 999	10 823	11 766	11 782	11 715	12 872	13 818
Denmark	6 709	7 614	8 505	9 532	10 551	10 902	11 194	10 976	11 483	12 108
FR of Germany	45 895	48 224	53 386	56 462	59 676	60 646	62 822	62 820	65 099	65 340
Greece	2 208	2 854	2 966	2 981	3 375	3 720	3 202	2 892	3 282	3 505
Spain	21 081	23 025	24 595	24 441	27 039	29 234	29 215	29 674	32 291	34 433
France	41 693	46 860	50 441	53 692	55 996	59 495	60 537	63 107	67 720	72 946
Ireland	4 522	4 905	5 587	6 155	6 635	7 274	7 289	7 807	8 548	9 078
Italy	20 371	22 532	24 428	31 737	38 611	37 469	38 397	41 029	45 636	47 724
Netherlands	17 352	18 813	20 123	21 543	23 041	23 622	21 434	21 035	17 366	18 535
Portugal	2 172	2 612	3 052	3 265	3 607	3 837	3 809	3 989	4 450	4 746
United Kingdom	40 854	43 314	49 323	50 415	55 927	57 569	51 118	56 249	62 485	70 605

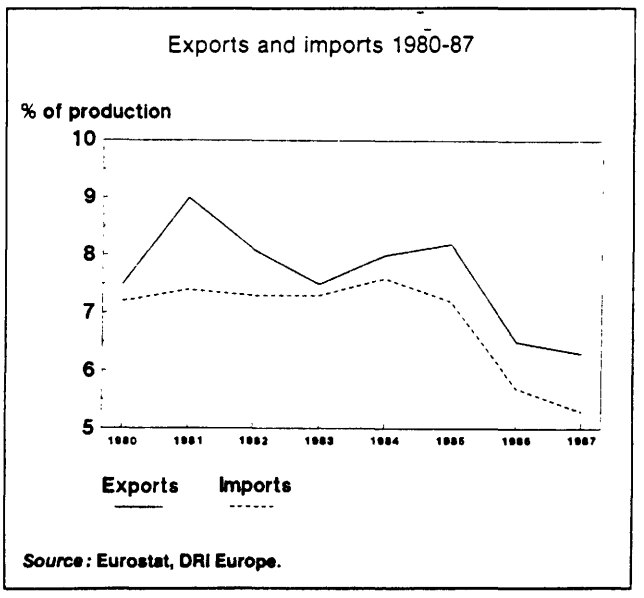
Source: Eurostat (Ind

Figure 2



tastes of the target population, national regulations, tariff and non-tariff barriers. This explains why the food and drink industry is in general stronger in densely populated industrialized regions with extensive transport facilities than in regions with high agricultural production levels. This is also why it is important to build new production units, or have a stake in third markets through direct investment or shareholdings in existing companies.

Figure 3

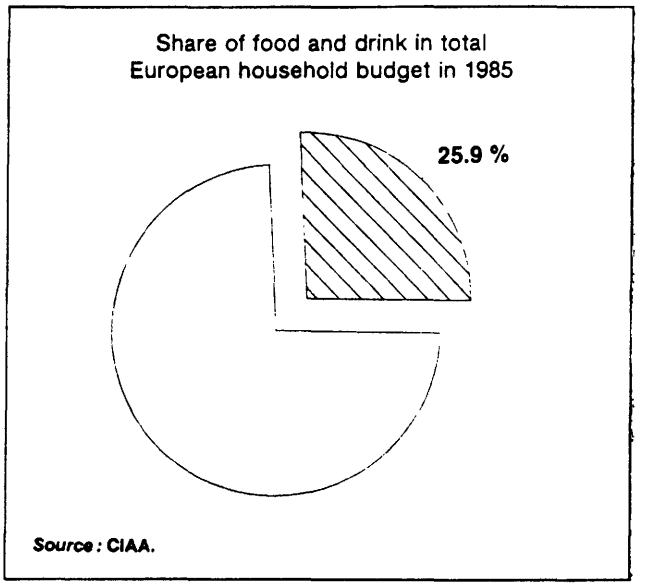


Among the 70 largest European companies, there are 13 firms from the food and drink industry. These represent 17% of the total turnover. Their average annual turnover growth is, however, rather low (6.8%). The slow demographic growth especially in Europe is one reason for this. Investment represents 19.8% of the added value of those 13 firms in 1988. This is a 3.4 point increase compared to 1983. Net margins of these major firms of the food and drink sector have strongly increased since 1984, to stabilize at 7.3% of turnover. This net income in percentage of turnover was 5.8% in 1988. This is the same as for the 19 major US food and drink companies. For the six major Japanese firms of the sector, net income only represented 1.3% of turnover.

Description of the industry

The scope of the food and drink industry includes all activities involved in the processing of agricultural products with the exclusion of farming, but it includes fish and meat processing. It is covered by NACE class 41/42, groups 411 to 428. Tobacco, which is NACE code 429, is often considered separately.

Figure 4



With a population of 320 million consumers, the EC is a vast and varied market for the food and drink industry. Consumer demand for food, drink and tobacco products accounts for approximately 70% of total domestic demand. Food and drinks are the largest single item of household expenditure on goods and services: in 1985, it represented 25.9% of total European household budgets, slightly lower than previous years. However, it varies widely from country to country: it reached 40.3% in Greece, 39.7% in Portugal, and 30.7% in Belgium, while in France, it was only 16.6%.

Within the food and drink industry, the share of different products in total production was the following in 1988: slaughtering 18.3%, dairy products 17.9%, compound feed 7.8%, vegetable and animal fats

Table 4
Employment

(1 000)	1980	1981	1982	1983	1984	1985	1986	1987(1)	1988(1)	1989
EC	2 563.6	2 477.2	2 402.9	2 373.9	2 350.8	2 308.5	2 259.8	2 232.0	2 208.3	2 202.6
Belgium, Luxembourg	72.8	70.6	70.4	69.5	69.9	68.4	67.1	66.4	64.5	64.3
Denmark	65.2	64.4	64.2	65.0	66.8	69.8	71.4	71.2	70.3	70.2
FR of Germany	482.5	475.4	456.3	444.7	436.5	432.4	430.6	430.1	430.6	430.6
Greece	49.7	49.7	49.0	47.0	50.2	55.7	55.4	56.4	56.4	56.3
Spain	382.1	365.9	348.8	342.6	332.3	331.1	330.3	322.0	322.0	321.3
France	400.7	392.9	395.8	394.9	377.8	366.6	354.6	355.6	340.9	340.2
Ireland	51.7	50.2	48.0	47.4	46.5	43.8	43.3	42.8	41.9	41.8
Italy	215.8	209.1	204.6	225.5	233.5	225.5	211.7	203.5	197.4	197.6
Netherlands	122.5	122.8	116.8	113.5	112.6	113.2	112.9	112.3	133.3	133.0
Portugal	88.2	88.0	87.8	85.8	82.0	79.4	75.1	72.7	74.8	74.7
United Kingdom	632.5	588.3	561.2	538.0	542.6	522.5	507.5	499.1	476.2	472.6

(1) Estimated.

Source: Eurostat (Inde).

Table 5
Extra-EC exports (1)

(million ECU)	1980	1981	1982	1983	1984	1985	1986	1987
EC	13 898.8	18 430.9	18 088.6	18 152.1	21 232.5	22 314.5	19 698.6	19 653.6
Belgium, Luxembourg	725.1	1 051.4	925.2	865.5	1 165.8	1 104.1	864.6	698.9
Denmark	1 199.0	1 589.4	1 568.7	1 785.4	2 390.1	2 520.8	2 314.3	2 230.9
FR of Germany	2 272.6	2 943.1	2 853.6	2 641.9	2 959.3	3 106.4	2 931.9	2 871.7
Greece	N/A	369.5	347.5	378.8	448.0	416.4	288.8	260.0
Spain	N/A	N/A	N/A	N/A	N/A	N/A	895.8	1 378.2
France	3 731.7	4 708.8	4 152.6	4 169.9	4 830.3	4 901.5	4 067.7	3 854.9
Ireland	469.4	622.6	726.2	827.0	916.4	1 006 9	882 7	971 5
Italy	1 049.0	1 686.9	1 673.8	1 518.9	1 893.7	2 312.7	1 771.8	1 553 0
Netherlands	2 335.9	2 993.5	3 211.3	3 327.1	3 739.3	3 739.4	3 031.3	3 167.9
Portugal	N/A	N/A	N/A	N/A	N/A	N/A	207.4	188.0
United Kingdom	2 116.1	2 465.7	2 629.7	2 637.6	2 889.6	3 106.3	2 442.3	2 478.6

(1) 1980 Greece, Spain and Portugal included as third countries; 1981-85 Spain and Portugal included as third countries.

Source: Eurostat (Bise).

Table 6
Extra-EC imports (1)

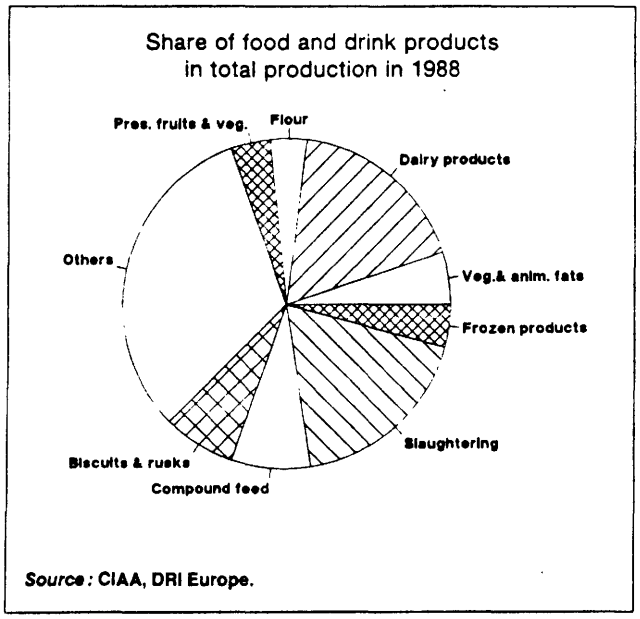
(million ECU)	1980	1981	1982	1983	1984	1985	1986	1987
EC	13 392.5	15 003.2	16 383.1	17 681.2	20 064.9	19 775.0	17 147.9	16 549.4
Belgium, Luxembourg	611.8	718.4	854.4	992.3	1 129.6	1 080.6	830.7	760.6
Denmark	493.7	559.5	579.0	709.3	768.1	734.4	760.0	697.7
FR of Germany	3 222.9	3 590.7	3 896.6	4 224.8	4 615.3	4 554.8	3 808.7	3 677.2
Greece	N/A	117.4	160.0	162.3	171.7	179.3	147.8	161.4
Spain	N/A	N/A	N/A	N/A	N/A	N/A	683.5	744.9
France	2 296.7	2 597.4	2 683.3	2 864.7	3 193.7	3 044.2	2 606.8	2 626.3
Ireland	139.7	152.7	131.1	147.7	146.4	160.5	143.5	146.2
Italy	1 403.5	1 441.9	1 769.6	1 847.6	2 166.3	2 570.7	1 914.2	1 939.4
Netherlands	1 673.4	1 909.9	1 987.8	2 385.6	2 750.8	2 618.4	1 966.0	1 889.5
Portugal	N/A	N/A	N/A	N/A	N/A	N/A	214.9	240.5
United Kingdom	3 550.8	3 915.3	4 321.3	4 346.9	5 123.0	4 832.1	4 071.8	3 665.7

(1) 1980 Greece, Spain and Portugal included as third countries; 1981-85 Spain and Portugal included as third countries.

Source: Eurostat (Bise).

5.1%, preserved fruits and vegetables 3.9%, frozen products 4.2%, biscuits and rusks 7.2%, flour 3.6% and others 32% (this includes poultry, olive oil, ice-cream, margarine, bread, alcohol and spirits, brewing and malt, soft drinks, sugar, coffee, tea and vinegar).

Figure 5



Source: CIAA, DRI Europe.

Industry structure

The European food and drink industry is made up of a mixture of firms and sectors with very different structural and operational characteristics. This variety is due to the diversity of market demand, market size and the technologies and traditions particular to each country and each sector.

In general, the food and drink industry remains highly fragmented in Italy, Spain and Portugal and is more concentrated in northern Europe. However, this concentration process is already well underway in southern Europe, but it often comes from outside. This low degree of concentration of the Mediterranean food industry entails dangers for these countries as giant groups are built in the UK, France and the Federal Republic of Germany.

According to *European Economy*, March 1988, which gives some results of the studies undertaken on the costs of non-Europe, the 'Cecchini report', the share of large enterprises (employing more than 500 people) in total turnover of the sector is 48.2% in Belgium, 46.7% in the Federal Republic of Germany, 44.4% in France and 43.1% in the Netherlands.

The major European food companies and their market concentration are presented in Table 8. Unilever and Nestlé are respectively number one and two in the world. However, the industry trend towards global consolidation is dominated by American companies which fill the other 8 places in the world top 10.

Both Unilever and Nestlé have more than 200 food processing plants in the EC. Between 1983 and 1988, Unilever sold 90 plants and bought 100.

In fact, this is just one example of the structural change in the European food and drink industry, which is now in full force. Companies are changing hands and new alliances are being forged at a record rate. Two kinds of 'groups' have developed: conglomerates (as for example Hillsdown Holdings, Hanson, Beatrice) and more oriented and specialized groups (such as BSN, Ferruzzi, RJR Nabisco, Philip Morris). They are raising phenom-

Table 7
Share of food and drink in total household budgets

(%)	1980	1981	1982	1983	1984	1985	1986	1987	1988
EC (1)	25.3	26.7	26.8	26.7	26.4	25.9	N/A	N/A	N/A
Belgium	30.3	29.6	30.1	30.9	31.0	30.7	30.5	N/A	N/A
Denmark	25.0	25.4	25.1	24.7	24.7	23.6	23.0	22.7	N/A
FR of Germany	24.0	23.6	23.1	22.4	22.3	21.9	N/A	N/A	N/A
Greece	40.1	42.1	42.6	42.8	41.3	40.3	39.9	N/A	N/A
France	17.1	17.0	16.9	16.8	17.0	16.6	16.3	16.0	16.7
Italy	26.1	25.5	25.5	24.9	24.1	23.4	23.6	N/A	21.3
Luxembourg	23.0	22.9	24.0	24.5	23.6	23.3	22.5	N/A	N/A
Netherlands (2)	17.8	18.3	18.4	18.1	18.2	18.0	18.0	N/A	N/A
Portugal	N/A	39.3	39.9	39.8	40.2	39.7	38.8	38.6	N/A
United Kingdom	23.9	23.1	22.5	22.3	22.0	21.5	20.9	N/A	N/A

(1) Excluding Spain and Ireland.
(2) Netherlands 1985-86: CIAA estimates.

Source: CIAA.

Table 8
Major European food companies, 1988

Company	Country	Approximate market capitalization (billion ECU)
Unilever	UK/Netherlands	12.75
Nestlé	Switzerland	9.75
BSN	France	3.90
Cadbury Schweppes	UK	3.30
ABF	UK	1.95
RHM	UK	1.95
United Biscuits	UK	1.80
Hillsdown	UK	1.80
Suchard	Switzerland	1.65
Source Perrier	France	1.50
S&W Berislord	UK	1.20
Dalgety	UK	1.05
Unigate	UK	0.90
Northern Foods	UK	0.90
Tate & Lyle	UK	0.90
Booker	UK	0.90
St Louis	France	0.90
Beghin-Say	France	0.90
Bongrain	France	0.75
Hazlewood	UK	0.60
Salvesan	UK	0.60
Wessanen	Netherlands	0.45
Hero	Switzerland	0.45

Source: CIAA.

enal sums to buy subsidiaries, while they auction off some of their unwanted plants. The market must now be considered on a world scale as internationalization has become an essential part of the industry's strategy. This is partly linked to the need to diversify because of the exchange rate and raw material price fluctuations (e.g. sugar, coffee etc.).

Recently, the pace of mergers and acquisitions has accelerated. To give only some of the numerous examples: R.J. Reynolds merged with Nabisco, Guinness acquired Arthur Bell and Distillers, Philip Morris bought General Foods, Cadbury Schweppes acquired Chocolat Poulain and Basset Foods (for ECU 240 million), Seagram bought Martell (for ECU 760 million), United Biscuits acquired Ross Young, Buitoni was sold to Nestlé as well as Rowntree (for ECU 6.4 billion) and Côte d'Or, Kronenbourg merged with Maes, BSN bought HP and Lea and Perrins UK sauce business (ECU 270 million), Pillsbury was bought by Grand Metropolitan (ECU 4.4 billion).

This phenomenon is not particular to EC companies: the Japanese drink group Suntory took over Louis Roger Cognac, Mitsubishi Corporation bought the Dutch Princes canned food and Trex brands fats and oils, Guinness launched a joint venture with South Korea's largest spirits company Jiro.

The move into the European food market by Japanese companies is motivated by the fear of restrictions on 'outsiders' after 1992. Their strategy is therefore to buy a domestic producer in a market where there is no significant current import share.

What is often more important to acquire is control of well-known brand names, which are very valuable items as it takes more and more time and money to build one. This is particularly true for the confectionery industry.

The long list of mergers and acquisitions in the industry results in an extraordinary degree of concentration on a world scale, especially in the drink business since Canadian Seagram bought the French Martell group in March 1988. (Alongside the UK giants Guinness, Allied Lyons and Grand Metropolitan are the French Pernod-Ricard and Moët-Hennessy groups).

Attractive acquisitions have become rare. The need to increase market shares and the associated global competition has pressured companies to move to higher value-added products and to expand into the rapidly growing Far East markets. Large advertising budgets, extensive world-wide distribution networks and clear brand identification seem to be logical but are very expensive to maintain, hence the incentive to increase size. At a time when the European market becomes unified and Far Eastern markets open up, size and brand names are prerequisites for the essential large-scale production.

Two types of strategies are adopted by most European food producers. The first one is the focusing of activities around one main product as many companies in the drink and tobacco industry have done (Coca-Cola, Perrier, Marlboro). The second one is to try to expand the company's share of the market through acquisition, whatever the product (e.g. BSN of France). This strategy is more expensive but explains the high level of mergers which have taken place in the last five years.

Another phenomenon is a movement towards centralization in product line (up and down markets). Diversification remains, however, an important target. Industrial, financial and commercial links between companies enable them to take advantage of economies of scale and of a better knowledge of foreign markets. Slow growth in consumer expenditure on food has led firms wishing to sustain their growth rates to diversify and specialize in products now preferred by the consumer, such as prepared dishes, diet products, frozen food, etc.

It should be mentioned that retail distributors are now occupying a key role in the food and drink sector. Directly in contact with the consumer, they are able to adapt their behaviour quickly to market needs and play an important role in consumer information, advertising and in the marketing of foodstuffs. Important purchasing cooperatives were built over the last few years, e.g. in the Federal Republic of Germany and France. Another phenomenon which worries many food and drink manufacturers is the growing strength of retailers' own brands (e.g. Carrefour in France, FDB in Denmark and Ahold in the Netherlands).

Risks and opportunities

More than 200 non-tariff barriers between Member States were identified in the food and drink sector by the Cecchini report (*European Economy*, March 1988, EC Commission). These are mainly packaging and labelling regulations (e.g. health registration numbers), specific import restrictions (e.g. sanitary laws in the UK or Spain), content or denomination regulations (e.g. for beer), specific ingredient restrictions (e.g. for softdrinks), fiscal discrimination (e.g. beer in the UK and margarine in Italy). The costs to the food and drink industry resulting from non-tariff barriers was estimated in a range of ECU 500 to 1 000 million annually, not taking into account the inevitable restrictions in consumer choice. Savings which would follow the elimination of trade obstacles represent 2 to 3% of the total value-added of the sector.

Direct benefits from the removal of these services should have three different origins:

- use of less expensive ingredients (e.g. in the fabrication of pasta in Italy);
- reduction of packaging and labelling costs;
- elimination of bureaucratic and administrative restrictions of imports (e.g. imports of spirits in Spain).

The measures expected to bring the largest benefits are the removal of regulations concerning oils and fats, chocolate, ice-cream, pasta, saccharine, beer and plastic containers.

Moreover, indirect benefits are expected from the increase of competition, which will reinforce the restructuring of the industry.

More cross-border mergers and takeovers will probably take place within the coming years and the survivors will have to broaden their horizons beyond their national markets. EC companies operating in the common market do not, in the majority of cases, have an EC-wide strategy. Only about the 10 largest firms do, together with a presence in the five largest EC countries. Most of Europe's largest food companies still have an Anglo-Dutch base (except Nestlé). American firms are strongly placed to exploit the potential of the Community market.

One very important fact to consider is that the future expansion of the food and drink industry will be geographical as well as in product variety. Consumer habits and desires are continuously changing. Cultural values and socio-economic conditions are widely diversified and in evolution. To understand local needs and potential, a collaboration between researcher and marketer is essential. Competitive strategies for new products are best built upon the needs underlying the particular food in each region than upon the product itself.

The general development in consumption is towards more elaborate processed products with a higher technological and service element. The three dominant forces driving demand in the food markets are:

- higher-quality or perceived higher-quality products (natural, light products such as low-fat milk, fresh poultry, high-fibre products, wholewheat bread, products with fewer additives);
- higher-convenience products (ready meals such as breakfast cereals for example, microwavable, chilled meals);
- high-variety products (exotic food, such as fresh juices and fruits).

Future developments in food technology will be clearly monitored both by consumer watchdogs and the retail trade for all artificial E-numbered additives and preservatives.

Consumer choice is expected to increase at the level of individual Member States as consumer habits internationalize.

One important technological issue is the 'modified atmosphere packaging' (products sealed in containers in which the available air space is filled with various gas mixtures). This can prolong certain products' life and diminish wastage rates on meat, vegetables and other chilled products. According to Christopher Parker in the *Financial Times*, February 1988, 'food and packaging companies are busy seeking to enhance the benefits of packing fruits, vegetables and bakery goods in nitrogen or carbon

dioxide through the development of plastic impermeable materials'.

In that respect, the proportion of investment for environmental protection represents more than 3% of the total investment of the food and drink sector.

In 1986, this figure was 2.8% in the Federal Republic of Germany and 1.8% in the Netherlands. In the USA, it reached 2.5% in 1987.

Such investments and their real impact on pollution is of course very specific to products within the food and drink industry. It sometimes helps to reduce costs such as deodorization of vegetable oil or recycling of Kiesehlgur in brewing. In other cases, it leads to cost increases (e.g. the automation of the washing in sausage production).

In most cases, however, it tends to improve product quality and lead to better hygienic conditions.

Outlook

The future of the food and drink industry is conditioned, not only by future trends in consumer demand and purchasing power, but also by the ability of certain large groups to absorb recent acquisitions and turn them into profitable units, taking account of the sometimes excessive prices that had to be paid for them.

External factors such as income development, inflation, customer habits and, in the long run, demographic changes will also continue to play an important role for the industry.

Production of the four largest EC countries amounted to ECU 240 940 million in 1988, or 72.7% of the total EC production. A compound growth rate of 2.3% (in volume) is expected for production between 1989 and 1995 for these four countries considered as a whole. For apparent consumption, the equivalent rate is forecast to reach 2%.

However, the expected evolution will vary widely from country to country: the French and the Italian food sectors usually perform better than the German and the British ones. The structural changes and reorganization of the industry that have taken place in recent years and months will reinforce this tendency.

Somewhat higher growth rates are projected in France, which is a major exporter of food products and is the most trade-specialized of the four countries considered here (3.3% for production and 2.2% for apparent consumption are expected as compound rates between 1989 and 1995) and Italy, where exports still account for a low but rising share of domestic production (a 3.1% growth is projected for production and 3.0% for apparent consumption). The share of the food and drink sector will probably increase in the Federal Republic of Germany, as production is expected to grow by 2.3% per year between 1989 and 1995 and apparent consumption by 1.7%. The external position of the food and drink sector of the United Kingdom, which is already negative, is on the other hand expected to deteriorate. Production is only forecast to grow by 0.2% and apparent consumption by 1% between 1989 and 1995.

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VEGETABLE AND ANIMAL OILS AND FATS

(NACE 411)

Description of the sector

The vegetable and animal oils and fats industry comprises three major types of activity, corresponding to three distinct production stages. In the first stage, oilseeds and fruits are processed into either crude oils and fats or protein meal and cakes, and fish into crude fish oil and meal.

In the second stage, processing of crude oils and fats of vegetable and animal (land or marine) origin renders them suitable for eating as well as technical purposes.

In the third stage, margarine, biscuits, confectionery, mayonnaise, bottling, etc., are manufactured from processed edible oils and fats for consumer end-users.

In the Arctic and Antarctic zones, 'oils and fats' effectively means fats. In the tropical regions, it effectively means oils. Using the same equipment, in addition to the aforementioned activities, some plants also process lard and tallow (about 1.5 million tonnes per annum) and, in some cases crude olive oil and residue olive oil as well.

Production

The oils and fats industry crushes some 25 million tonnes of oilseeds and fruits (excluding olives) giving rise to the following estimated production breakdown:

- crude vegetable oils and fats: 6.5 million tonnes
- protein meal: 16.5 million tonnes

Depending on the type of raw material used, the added value ranges from ECU 25 to 75 per tonne of seeds or fruits. Half of the seeds are supplied by the EC agriculture, while half are imported from other countries, especially the USA, Brazil and Argentina.

In addition to oilseed crushing, the oils and fats industry also processes some 6.5 million tonnes of crude oils and fats of vegetable and marine origin (excluding olive oil) per annum.

The largest portion of crude oils and fats processed in the EC is supplied by the domestic crushing industry, but palm oil, as well as most of the coco, palm kernel and groundnut oil that is required is imported from third countries (mainly Malaysia, Indonesia, the Philippines, New Guinea, Senegal, Ivory Coast, and other African countries nearby).

Depending on the type of raw material used, the added value ranges from ECU 50 to 200 per tonne of crude oils and fats.

Domestic production accounts for 75%, and 50% of the EC consumption of crude oils and fats, and protein meal. The figure for processed oils and fats is close to 100%.

Table 1
Main indicators, 1980-89 (1)
Vegetable and animal oils and fats

(million ECU)	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Apparent consumption	11 706	13 072	14 224	15 805	19 495	18 415	18 543	18 519	19 957	N/A
Net exports	-2 474	-2 985	-3 440	-3 845	-4 170	-3 467	-2 892	-2 282	-3 034	N/A
Production	9 232	10 087	10 784	11 960	15 325	14 948	15 651	16 237	16 923	17 901
Employment (number)	47 950	47 612	46 407	45 186	43 193	40 968	54 676	53 986	53 940	53 835

(1) 1980 EC 9; 1981-85 EC 10.

Source: Eurostat (Inde, Bise, Comext).

Table 2
Production by type of oilseed in 1987 and 1988

(1 000 tonnes)	Oilseeds		% share		Raw oils and fats		% share		Oilcake		% share	
	1987	1988	1987	1988	1987	1988	1987	1988	1987	1988	1987	1988
Groundnut	28	55	.1	.2	13	26	.2	.4	14	28	.1	.2
Soya bean	13 747	12 423	59.8	54.2	2 434	2 174	39.6	34.4	10 915	9 938	66.9	62.7
Colza/rape	4 661	5 726	20.3	25.0	1 879	2 233	30.6	35.3	2 720	3 206	16.7	20.2
Sunflower	3 415	3 843	14.9	16.7	1 466	1 614	23.9	25.6	1 787	2 113	10.9	13.3
Others (1)	492	458	2.2	2.0	86	82	1.4	1.3	556	366	3.4	2.3
Coconut	95	71	.4	.3	57	45	.9	.7	33	25	.2	.2
Palm nuts and other laurics	96	61	.4	.3	45	28	.7	.4	42	32	.3	.2
Linseed	391	249	1.7	1.1	138	92	2.3	1.5	252	149	1.5	.9
Castor	50	49	.2	.2	23	23	.4	.4				
Total	22 975	22 935	100.0	100.0	6 141	6 317	100.0	100.0	16 319	15 857	100.0	100.0

(1) Excluding olives, maize germs and grape and tomato pips.

Source: Fediol.

The EC oils and fats industry has a relatively small work-force given the nature of the technical operations involved and the need to reduce processing costs. The industry is capital intensive and requires considerable investment.

Depending on the type of oilseeds and fruits that are crushed, the crushing capacities vary between 25 000 tonnes and 1.5 million tonnes per annum.

The range of capacities for the processing of crude oils and fats is far smaller.

Oils and fats are used, in decreasing order:

- for human consumption, roughly 75%
- in compound foodstuffs, especially in calf feed, roughly 12.5%
- for technical purposes, in the manufacturing of paint, varnish, soap, etc., roughly 12.5%.

Protein meal and cakes are used solely for animal consumption, either directly or indirectly in compound foodstuffs.

The EC oils and fats industry is one of the most important outlets for the EC agricultural sector. It virtually monopolizes domestic production of oilseeds (around 11 million tonnes):

	1987/88	1988/89
• rapeseed	5.8 million tonnes	5.3 million tonnes
• sunflower seeds	3.85 million tonnes	4.2 million tonnes
• soyabeans	1.88 million tonnes	1.6 million tonnes

It is the major outlet for crude fish oils from EC fisheries (130 000 tonnes), processes the majority of land animal fat production, i.e. crude lard and tallow, and fulfils the protein-meal requirements of the breeding sector.

Table 3
Oilseed production by country, 1987 (1)

(1 000 tonnes)	Oilseed process	% share	Crude oils and fats	% share	Protein meal	% share
EC	22 975	100.0	6 141	100.0	16 319	100.0
Belgium, Luxembourg	2 112	9.2	539	8.8	1 564	9.6
Denmark	250	1.1	83	1.3	162	1.0
FR of Germany	6 071	26.4	1 728	28.1	4 257	26.1
Greece	619	2.7	108	1.8	471	2.9
Spain	3 446	15.0	805	13.1	1 294	7.9
France	2 118	9.2	763	12.4	2 463	15.1
Italy	2 262	9.8	488	7.9	1 793	11.0
Netherlands	3 572	15.6	820	13.4	2 633	16.1
Portugal	1 022	4.5	256	4.2	759	4.6
United Kingdom	1 503	6.5	551	9.0	923	5.7

(1) The respective oils and meals' contents vary according to seed varieties: for soya, for example, these contents are respectively 17.5 % and 80 %; for copra they are 64 % and 33 %.

Source: Fediol.

In view of the variety of raw materials processed and the geographic location of the industrial facilities, the industry is able to maintain regular supplies in the required quantities and qualities, as well as cope with sharp rises or falls in demand for oil and protein meal.

In order to meet a fluctuating demand, the oils and fats industry has large capacities, which can exceed the yearly average demand for oil or meal.

Production of oil and meal is complementary: one cannot be produced without the other. Meeting demands for oils and fats can result in a protein meal surplus; conversely, meeting demand for protein meal can give rise to an oil surplus.

In recent years, a greater increase in demand for protein meal rather than for oil and fat consumption has resulted in exports of soyabean oil and rapeseed oil despite increasing obstacles encountered on the international market, stemming either from the importing countries or the unfair competition of other exporting countries.

Trade

The industry is highly competitive and efficient. It is also advantageously placed regarding both its supply of raw materials (it is not totally dependent on any single source) and consumer markets, whether with respect to oils or meals. It is characterized by efficient technology and considerable know-how, as well as dynamic trade and quality policies, which are focused on domestic and external markets. But, despite its efficiency, the EC oils and fats industry is experiencing increasing hardship.

The difficulties encountered are not due to a weak competitive position relative to foreign competitors or the decreasing demand for oils and/or meals but rather to measures taken by public authorities, sometimes within the EC, more often in foreign countries, in which case they are the most harmful.

Customs duties for oils and fats range from 0 to 15%, according:

- to the geographical origin of the product
- to whether they are intended for human consumption or technical purposes
- to the degree to which they are processed.

Protein-meal imports are duty-free.

Oils and meals can be imported freely: there are no quotas or other measures to which they are subject, whether indirectly or directly.

As a result, on the domestic market, the prices of products derived from oilseeds (i.e. oils and meals) are those of the world market.

Since the domestic oilseed production only represents between 40% and 50% of the volume of seeds processed within the EC, the crushing industry must turn to external sources for its supplies, i.e. either to industrialized nations for soyabeans, sunflower seeds, linseeds and occasionally rapeseed, or to developing countries for groundnuts, copra, palm kernel, castor beans, etc.

Over and above domestic production, substantial quantities of oils and fats are imported, partly in competition with the home production (groundnut oil, coconut oil, palm kernel oil, linseed oil, fish oil, etc.) partly because these oils cannot be produced in the EC like palm oil.

Industrialized countries such as the USA, Canada, Sweden and Poland export raw material (oilseeds) as well as manufactured products (oil and meal).

A growing tendency in developing countries, which were originally raw material exporters, to produce oil themselves for local consumption and exports alike, has caused a falling of the prices of oils and meals.

Table 4
Overall results of the European oils industry, 1987 (1)

(1 000 tonnes)	Industr. prod.	Imports extra-EC	Exports extra-EC	Apparent consump.
Vegetable products				
Fluid oils	5 995	438	2 045	4 388
Lauric oils (2)	94	802	19	877
Linseed oil	138	8	40	106
Castor oil	23	72	4	91
Palm oil	N/A	915	14	901
Total	6 250	2 235	2 122	6 363
Protein meal	16 319	17 963	2 410	31 872
Marine products				
Fish oil	132	359	28	663
Fish meal	450	923	284	1 089

(1) Except olive oil.
(2) Coconut and palm kernel.
Source: Fediol.

This is illustrated as follows by the course of the market share of imports from developing countries.

- seed: fell from some 33% in 1956 to 3.3% in 1987
- for oils and fats (including olive oil): reached some 96% in 1987.

This type of policy is mainly carried out by Argentina and Brazil in the soya, sunflower, groundnut and flax sectors, and by the Philippines and Malaysia in the copra and palm kernel sectors.

As a result, EC industries which used to specialize in groundnut, copra, palm kernel and castor processing have had either to cut back their activities considerably in these sectors or stop them altogether. Only the crushing of oilseeds (soyabeans, rape and sunflower seeds) from industrialized countries has been in step with internal demand.

The policy of developing countries of pushing exports of processed product not only affects oilseeds in relation to oil and meal, but also crude oil in relation to processed oils. This is the case in Malaysia, which not only stopped the export of oilseed like palm kernel, but also that of crude palm oil to the benefit of processed palm oil.

These practices are not without a negative impact on the refining, hydrogenation and fractionation of palm oil in the EC.

In the light of these difficulties, those involved in the EC industry are aware of the need for continuing dialogue between all parties and for an increased mutual respect of present and future agreements and commitments under the relevant international rules.

For several years, highly subsidized dairy products such as butter and skimmed-milk powder have created a serious imbalance, mainly in the vegetable oil market, but also occasionally in the protein meal market. There are still subsidies for butter and skimmed-milk powder, but the amounts and numbers of these have been reduced in connection with the reforms in the dairy sector.

Another factor is the system of taxes levied in Belgium, France and Luxembourg, where the VAT rate on margarine is about three times the rate adopted for competing products like butter.

Outlook

The future of the EC industry is directly affected by policies practised in the various geographic oilseed production and processing areas. Major geographical areas such as the following set their own policies:

- the EC
- countries with a centralized economy like the USSR, Poland, etc.
- other industrial nations like the USA, Canada, Sweden, etc. with occasional impacts on foreign trade
- more or less developed countries such as Argentina, Brazil, Malaysia, Indonesia and the Philippines, which have well-defined production targets and changing export policies.

The consumption of oils and meals in the EC shows great stability if not a decreasing trend in the case of meals. The demand for edible oils and fats seem to have reached a stable level, at least per capita. The drop in household consumption has been compensated by an increase in intermediate consumption of edible oils and fats. As a result, consumption is evolving only in accordance with population growth, which is relatively stable. Demands arising from technical applications could increase if technology and research progress.

For foodstuffs (oils and meals) no increase is foreseeable. Animal feed consumption depends, on the one hand, on the demand for meat, dairy and poultry products. On the other hand, oilseed products have to compete with other foodstuffs like corn-gluten feed, peas and beans, green fodder, etc.

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OLIVE OIL

(NACE 411.2)

Summary

Olive-oil production is a complex activity. Two qualities of olive oil are produced — virgin and refined — depending on the quality of the olive. Olive pomace oil is manufactured from olive pomace obtained from crushed olives.

Current situation

Olive-oil is produced in two ways, according to the quality of the raw material.

The first production technique consists of simply crushing the fruit, which is known as olive pressing, then filtering the product obtained. High-quality olives are necessary for this technique and the olive oil obtained, virgin olive oil, is accordingly of very high quality; with low acidity and a pleasant flavour, it is biologically the best vegetable oil. Subsequent reprocessing of the final by-product after the crushing operation produces olive pomace oil, and this by-product still contains a little oil. This oil is extracted by means of the solvent hexane. Refining the resulting raw oil yields neutral pomace oil, which, blended with virgin oil, yields olive pomace oil.

Since it is difficult to obtain high-quality raw material, a second production technique is used (see below). This difficulty arises mainly from the fact that olive plantations are scattered. There are alternatives:

- delay delivery of olives to the few large factories (in this case, the quality of the oil decreases in relation to storage time)
- increase the number of small installations close to olive plantations (in this case, competitiveness drops sharply and oil production costs soar).

One possible solution is the construction of warehouses specially adapted to olives. Current techniques are not entirely satisfactory in that they do not eliminate parasite attacks.

The second production technique is industrial. It consists of crushing, refining and if necessary, blending oils of different origins. Refining is the traditional processing technique for liquid oils and involves neutralization, decolorization, deodorization and demargarination. This process yields neutral oil as well as fatty acids. Neutral oil has the same biological qualities as virgin oil except for the flavour and is thus blended with a greater or lesser percentage of virgin oil before being put on the market.

These two production techniques explain the differences in price between virgin and non-virgin oils.

Regulatory environment

Community regulations are designed to:

- give producers a guaranteed income (production subsidies)

Table 1
Main indicators
Olive oil

	EC		Third countries		World	
(1 000 tonnes)	**1986/87**	**1987/88**	**1986/87**	**1987/88**	**1986/87**	**1987/88**
Production (1)						
Olive oil	1 190	1 531	424	270	1 614	1 698
Edible olive marc oil	96	129	5	6	101	120
Total	1 286	1 660	429	276	1 715	1 818
Consumption (1)						
Olive oil	1 326	1 335	435	438	1 761	1 773
Edible olive marc oil	100	101	51	23	151	124
Total	1 426	1 436	486	461	1 912	1 897

(1) 1987/88 provisional figures.

Source: Fedolive.

3)

- underpin the Community market (intervention price)

Table 2
Olive oils and edible olive marc oil, 1986-87

(1 000 tonnes)	Virgin and refined	Edible olive marc oil	Total
Stocks 1.11.86	577	89	666
Production	1 190	96	1 286
Imports extra-EC	20	0	20
Total supply	1 787	185	1 972
Consumption	1 326	100	1 426
Exports extra-EC	92	54	146
Stocks 31.10.87	369	31	400

Source: Fedolive.

- facilitate the marketing of the product within the EC (consumption grants)
- assist exports (export compensation).

Industry structure

The Community has under cultivation 5.3 million ha of olives, corresponding to 544 million olive trees (4% of the area of the Community). Over 2 million farmers, broken down as follows by country, rely on olive cultivation for at least part of their income: about 900 000 in Italy, 550 000 in Spain, 350 000 in Greece, 200 000 in Portugal and 45 000 in France.

Production structures differ widely between countries. In Italy and Greece, olives are usually cultivated in regions where no other crops are possible and where the disappearance of olive cultivation would mean not only social but also ecological deterioration. The situation in Spain is quite different. Olives are cultivated over vast areas: they are harvested in bulk, and crushed in large-scale oil mills, which usually belong to cooperatives. The oil obtained is generally refined there. The Spanish olive oil industry, over 70% of which is situated in the south of the country, has recently undergone far-reaching restructuring; considerable efforts have been made to improve profitability. Portugal and France are relatively problem-free compared to other producer countries.

Consumption

Spanish consumers are accustomed to blends of refined and virgin oil. The Greeks and the French consume mainly virgin olive oil. Italian consumers are equally divided between virgin oils and oil blended either with refined olive oil or olive pomace oil.

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Table 3
Production of olive oil

(1 000 tonnes)	1986/87			1987/88 (1)		
	Olive oil	Edible olive marc oil	Total	Olive oil	Edible olive marc oil	Total
EC	1 180.0	95.5	1 275.5	1 531.5	128.5	1 660.0
Greece	300.0	24.0	324.0	250.0	30.0	280.0
Spain	493.5	39.5	533.0	691.5	55.5	747.0
France	1.0		1.0	2.5	:	2.5
Italy	354.5	28.5	383.0	550.0	40.0	590.0
Portugal	31.0	3.5	34.5	37.5	3.0	40.5

(1) Provisional figures.

Source: Fedolive.

MARGARINE

(NACE 411.5)

Summary

The margarine industry forms an important part of the EC oils and fats industry. It is composed of some 109 companies employing approximately 25 000 people and produces almost 25% of the world margarine output. A substantial part of the oil used for manufacturing margarine is obtained from Community-grown oilseeds. The largest producers are the Federal Republic of Germany, the United Kingdom and the Netherlands. The highest consumption per capita is in Denmark, the Netherlands and Belgium. Besides margarines, the industry is also engaged in the production of minarines. During the last few years the industry has gone through an important period of restructuring during which the numbers of both companies and employees have been reduced.

Description of the sector

The principal product of the industry is margarine for consumers and professional use. Even though the definition of margarine varies from country to country, margarine can, in general, be defined as an emulsion of oil in water consisting of at least 80% fat of which not more than 3% is butter fat. However, these percentages may vary: in the United Kingdom and France, margarine can contain up to 10% butter fat, in Spain up to 50%. The second most important product is minarine, which differs from margarine in its fat content: it contains between 39 and 41% fat. Production of minarine is not allowed in some EC countries, for example Italy. In some EC countries, principally the United Kingdom and Ireland, the industry is also involved in the production of spreads and products which are mixtures of butter fat and non-butter fat in varying percentages.

Current situation

In 1988 the industry produced 1.78 million tonnes of margarine, including minarine and spreads. This represents almost 25% of total world margarine production. The highest production was in Germany (472 000 tonnes), followed by the United Kingdom, the Netherlands, Belgium and France. Total EC margarine production increased between 1978 and 1982, but has been slowly decreasing since then. In some Member States such as Belgium, Greece, Spain and Portugal, however, production has followed an upward trend since the beginning of the 1980s.

Consumption

The average consumption of margarine per capita in the EC was some 6.1 kg in 1988. For the EC as a whole, per capita consumption decreased from 6.3 kg in 1982 to 6.1 kg in 1988. Denmark has the highest per capita consumption (15.0 kg in 1988) followed by Belgium (13.8 kg) and the Netherlands (10.2 kg). Consumption of so-called solid fats is traditionally very low in the Mediterranean countries: margarine consumption in Italy was 1.3 kg per capita in 1988 and 1.3 in Spain.

Industry structure

There were 109 companies in the European margarine industry in January 1986: seven in Belgium, 14 in Denmark, 19 in the FR of Germany, 11 in Spain, seven in France, one in Greece, four in Ireland, 19 in Italy, 15 in the Netherlands, four in Portugal and eight in the United Kingdom.

Table 1
Main Indicators, 1980-88
Margarine

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987	1988
Production	1 740	1 774	1 798	1 774	1 773	1 774	1 766	1 764	1 785
Index	100	102	103	102	102	102	102	101	-
Consumption per capita (kg)	6.0	6.1	6.3	6.2	6.3	6.3	6.1	6.1	6.1

Source: Imace.

Table 2
Margarine and minarine production

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987	1988
EC	1 740	1 774	1 798	1 774	1 773	1 774	1 766	1 764	1 785
Belgium, Luxembourg	158	150	161	159	169	172	171	184	183
Denmark	98	103	110	103	110	107	99	99	103
FR of Germany	511	518	516	500	483	466	470	470	472
Greece (1)	13	13	13	24	24	24	27	27	27
Spain	46	47	47	54	57	59	64	67	88
France	165	165	166	162	154	154	153	153	161
Ireland	16	18	18	16	16	17	17	18	19
Italy	69	72	72	68	64	65	65	68	72
Netherlands	243	247	254	254	265	282	264	232	226
Portugal	38	43	42	47	50	51	52	55	59
United Kingdom	383	398	399	387	381	377	384	391	375

(1) Estimated.

Source: Imace.

Table 3
Per capita consumption of margarine

(kilograms)	1980	1981	1982	1983	1984	1985	1986	1987	1988
EC	6.0	6.1	6.3	6.2	6.3	6.3	6.1	6.1	6.1
Belgium, Luxembourg	11.8	11.8	12.6	12.9	13.6	13.8	13.7	13.8	13.8
Denmark	16.8	17.2	18.3	16.9	16.8	16.3	15.0	15.0	15.0
FR of Germany	8.4	8.4	8.4	8.3	7.9	7.6	7.7	7.7	7.7
Greece (1)	2.3	2.3	2.4	2.5	2.6	2.6	2.8	2.9	3.0
Spain	1.0	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3
France	3.7	3.7	3.8	3.8	3.8	3.7	3.7	3.7	3.8
Ireland	3.7	3.7	3.7	3.7	3.7	3.7	3.9	4.1	4.1
Italy	1.2	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.3
Netherlands	12.6	12.3	12.0	12.0	11.8	12.5	11.7	10.3	10.2
Portugal	4.6	4.9	5.2	5.4	5.7	5.8	5.9	6.2	6.5
United Kingdom	7.0	7.4	7.5	7.4	7.4	7.3	7.4	7.5	7.3

(1) Estimated.

Source: Imace.

Trade

At present, trade in margarine within the Community covers less than 1.5% of total production. Trade between Member States is mainly going from Belgium (66 000 tonnes in 1987) and the Netherlands (85 100 tonnes) to the United Kingdom and France. Exports are very low. Trade in margarines and minarines between Member States has been gradually increasing in recent years; from well below 10% at the end of the 1970s, it has now risen to almost 15% of total production.

Regulatory environment

Despite several attempts during the last 15 years, national legislation concerning margarine has still not been harmonized at EC level. In terms of advertising and taxation, margarine is still discriminated against in a number of EC countries compared with competing products. There are different VAT rates for margarine and butter in some EC countries. For example, margarine rates are much higher in Belgium (19% as compared to 6% for butter) and in France (18.6% as compared to 5.5% for butter) and Luxembourg. In some countries (Belgium and France) margarines must be clearly separated in display and in others (Italy, Greece) there are limitations affecting distribution channels.

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SLAUGHTERING, PREPARING AND PRESERVING OF MEAT

(NACE 412)

Summary

World meat production in 1988 was comparable to that in previous years. There was a slow rise in production in the Community and the United States, which are the most important producers. This trend was related to the fall in demand on the world market. Production grew slowly in China but grew much more rapidly in the USSR and the Eastern European countries (for example, pigmeat production; EC total was 12 083 million tonnes in 1987, 12 130 million tonnes in 1988 and will probably reach 12 113 million tonnes in 1989).

Description of the sector

The highly developed slaughter and meat processing industry comprises five subsectors:

- slaughterhouses (NACE 412.1)
- processing and preserving of meat (NACE 412.2)
- killing, preparing and preserving of poultry (NACE 412.3)
- processing of slaughter by-products (NACE 412.4)
- production of animal guts and meat offals (NACE 412.5).

Slaughterhouses will be analysed separately in the next chapter.

Pigmeat

Demand for pigmeat is still the strongest even though supply remained constant compared with previous years. There is a trend towards an increase in demand for lean pigmeat, which affects the slaughter weight. Despite this general trend, the fall in prices for foodstuffs has led to a rise in slaughter weight in North America.

Pigmeat production fell in Community countries in 1988, a rise in production occurring in Denmark only. The consumption of pigmeat amounts to one-third of the total meat consumption in the world.

Beef and veal

There has been a deterioration in the competitive position of trade on export markets. Nevertheless, the Community remains the major supplier for the Near East and North Africa. Community imports are stable from South America, which continues to be a major producer. The decline in beef and veal production that occurred in the main producer countries of the world in 1988 will persist according to the first 1989 estimates, reaching just 3%. The countries or areas most likely to experience market reductions are: USA (6.5%), Argentina (4%), Eastern Europe (4.3%) and the EC (2.4%).

Lamb

Lamb production continued its upswing in 1988, and in 1989 the growth rate should be about 3%. In Aus-

Table 1
Main indicators, 1980-89 (1)
Slaughtering, preparing and preserving of meat

(million ECU)	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Apparent consumption	32 236	34 621	43 931	41 713	48 320	50 360	55 488	57 354	60 845	N/A
Net exports (2)	-963	-373	-1 327	-872	-270	-732	-355	-382	-176	N/A
Production	31 273	34 248	42 604	40 841	48 050	49 628	55 133	56 972	60 669	64 706
Employment (number)	327 404	320 000	321 337	323 310	342 984	339 378	399 108	392 685	386 699	385 594

(1) 1980 EC 9; 1981-85 EC 10; 1986-88 EC 12 (estimated).
(2) 1988 excluding Greece.

Source: Eurostat (Inde, Bise, Comext).

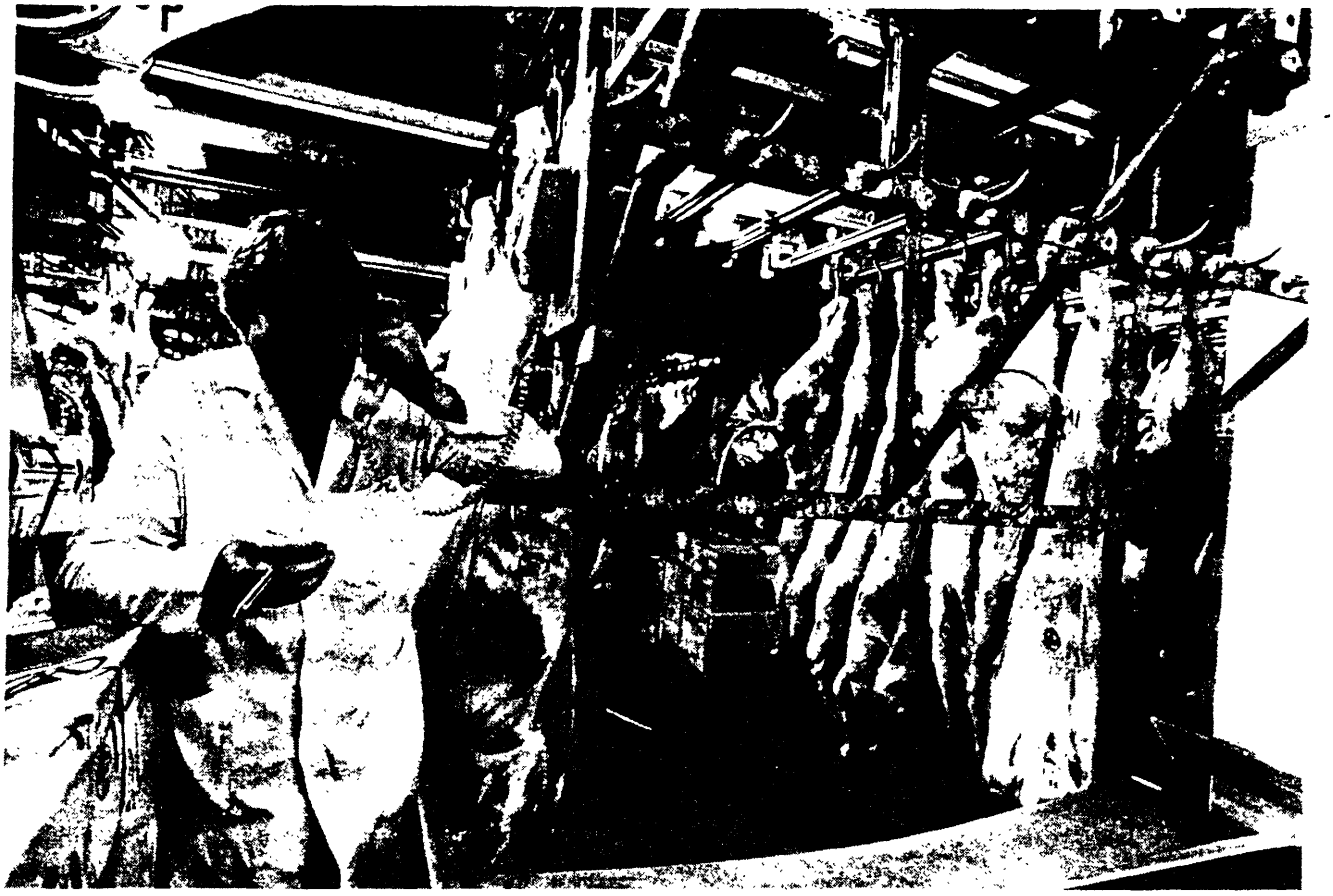

Table 2
Production and external trade

(million ECU)	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Production in current prices										
EC (1)	31 273	34 248	42 604	40 841	48 050	49 628	55 133	56 972	60 669	64 706
Index (2)	64.8	70.5	78.7	82.3	96.7	100 0	101 9	105 3	112.1	119.6
USA (3)	45 216	59 032	69 003	74 581	86 895	87 981	70 382	60 099	63 939	N/A
Index	51 4	67.1	78.4	84.8	98.8	100.0	80.0	68.3	72.7	N/A
Japan (3)	5 789	8 595	9 251	11 029	12 977	14 063	N/A	N/A	N/A	N/A
Index	41.2	61.1	65.8	78.4	92.3	100.0	N/A	N/A	N/A	N/A
Production in constant prices										
EC (1)	40 290	40 017	40 869	43 066	49 188	49 628	56 116	59 864	62 928	64 024
Index (2)	84.2	83.2	84.0	87.7	99.2	100.0	103.7	110.7	116.3	118.3
EC trade in current prices										
Imports extra-EC (1)	2 716	3 001	3 514	3 333	3 682	3 922	3 398	3 420	N/A	N/A
Index (2)	70.4	76.5	89.6	85.0	93.9	100.0	80.9	81.4	N/A	N/A
Exports extra-EC (1)	1 816	2 479	2 172	2 499	3 194	3 322	3 051	3 049	N/A	N/A
Index (2)	55.2	74.6	65.4	75.2	96.2	100.0	90.9	90.8	N/A	N/A
X/M (1)	.67	.83	.62	.75	.87	.85	.90	.89	N/A	N/A
Imports intra-EC (1)	7 045	8 008	9 234	9 595	10 008	10 970	11 247	11 348	N/A	N/A
Index (2)	64.2	73.0	84.2	87.5	91.2	100.0	102.5	103.4	N/A	N/A

(1) 1980 EC 9; 1981-85 EC 10.
(2) Taking into account changes in EC membership.
(3) Census of Manufactures and Eurostat estimates.

Source: Eurostat (Inde, Bise).

Table 3
Total meat production (1)

(million ECU)	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
EC	35 041	38 136	42 604	44 528	52 307	54 102	55 133	56 972	60 669	64 706
Belgium	905	1 021	1 019	955	1 027	1 126	1 129	1 124	1 233	1 325
Denmark	2 585	2 953	3 343	3 518	3 947	4 086	4 076	3 912	4 093	4 330
FR of Germany	6 024	6 181	6 986	7 200	7 827	7 931	8 298	8 276	8 593	8 641
Greece	108	137	160	164	171	169	162	158	168	180
Spain	3 500	3 705	3 891	3 463	4 002	4 144	4 258	4 241	4 604	4 908
France	8 591	9 805	10 883	11 989	13 472	14 468	15 276	15 925	17 089	18 341
Ireland	1 244	1 212	1 377	1 461	1 723	1 984	1 991	2 132	2 335	2 440
Italy	4 686	5 066	5 683	6 120	6 501	6 231	7 419	7 928	8 818	9 255
Luxembourg	36	40	42	43	44	46	45	42	49	53
Netherlands	2 793	3 234	3 576	3 711	4 104	4 230	3 838	3 766	3 109	3 322
Portugal	161	183	204	225	255	331	363	360	460	491
United Kingdom	4 408	4 600	5 440	5 680	9 235	9 357	8 277	9 108	10 118	11 420

(1) Estimated.

Source: Eurostat (Inde).

Table 4
Employment (1)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
EC	384 349	373 782	373 847	375 179	394 833	390 988	399 108	392 685	386 699	385 594
Belgium	7 768	7 605	7 403	6 985	7 119	6 872	6 730	6 663	6 472	6 458
Denmark	21 016	21 414	21 391	21 571	22 287	25 272	25 941	25 426	24 939	24 887
FR of Germany	58 457	56 771	54 294	52 527	53 008	52 279	53 069	52 910	52 915	52 910
Greece	2 524	2 401	2 373	2 400	2 508	2 783	2 806	2 763	2 763	2 757
Spain	49 663	48 852	47 409	47 004	46 433	46 117	46 835	44 847	44 847	44 753
France	85 538	85 425	89 579	94 206	94 894	93 452	94 576	94 713	90 933	90 749
Ireland	10 634	9 693	9 629	9 298	9 682	9 305	9 179	9 111	8 900	8 881
Italy	33 374	32 087	31 809	34 255	35 492	32 861	35 621	34 242	33 209	33 253
Luxembourg	393	458	445	464	476	479	475	465	463	462
Netherlands	21 035	20 551	19 899	17 480	17 761	17 522	17 443	17 343	21 074	21 030
Portugal	4 758	4 930	5 101	4 865	5 416	5 493	5 190	5 025	5 173	5 162
United Kingdom	89 189	83 595	84 515	84 124	99 757	98 553	101 243	99 177	95 011	94 292

(1) Estimated.

Source: Eurostat (Inde).

Table 5
Human consumption of meat

(kg/capita)	1980	1981	1982	1983	1984	1985	1986	1987
EC (1)	N/A	N/A	N/A	87.1	87.5	88.5	89.4	91.7
Belgium/Luxembourg	97.9	95.1	98.0	97.6	100.9	102.3	102.6	101.3
Denmark (1)	85.9	79.7	77.6	80.4	83.9	90.1	101.3	104.0
FR of Germany	100.5	98.5	97.7	98.0	98.9	100.4	102.0	103.5
Greece	67.0	69.6	72.8	79.1	77.6	78.7	78.4	87.4
Spain	N/A	N/A	N/A	82.3	84.1	83.8	82.3	86.0
France	108.7	106.5	105.3	106.4	106.6	105.5	107.1	108.2
Ireland (1)	97.9	95.6	97.0	98.3	91.5	90.4	92.9	90.6
Italy	78.6	77.4	79.4	80.8	80.9	83.8	83.9	84.9
Netherlands	77.2	77.6	79.2	75.2	77.0	78.8	79.1	85.6
Portugal	N/A	N/A	N/A	57.3	54.6	54.9	58.8	64.3
United Kingdom	75.2	74.1	73.1	73.5	73.5	74.7	75.2	77.9

(1) 1980-83 estimated.

Source: Eurostat (Zpa1).

tralia, sheepmeat production will increase by about 6% and lamb production by about 1.7%. In the People's Republic of China, a growth of 10% in production is expected. The increase in EC production is estimated at 2.5% for 1989.

Consumption and production

Pigmeat

Pigmeat production in the main producer countries rose by 2.8% in 1988, the countries with the highest growth rates being China (2.3%), the USSR (2.9%) and the EC countries (1.8%). For the current year, a decline in production by about 0.1% is expected. Falling production in the EC (5.2%) will be offset by further growth in China (2.9%), the USSR (2.9%) and Canada (2%).

Pigmeat production in the EC rose again in 1988 (2.8%), but a sharp decline (5.2%) is expected for 1989. The countries with the largest declines are: France (9.8%), Spain (9.1%), FR of Germany (6.7%) and the Netherlands (3.4%).

The risk is obvious, however, that because of the good profitability in pig rearing, stocks could once more be topped up, so that in 1990 we could well expect an increasing supply of pigs for slaughtering.

Beef and veal

In the EC 12, production declined by a good 6% in 1988. For the current year a decline of up to 2.4% is estimated. The countries with the most marked decline in production in 1988 are: France (-4.5%), FR of Germany (-4%), United Kingdom (-15%), the Netherlands (-8%) and Ireland (-12%).

Since it is assumed that consumption in the EC will stagnate, the degree of self-sufficiency fell back to 101.4% in 1988, and in 1989 it should sink to just below the 100% mark. The consumption figures, however, provide only very limited information, since they give no indication as to how the raw material meat is actually used, and are only figures compiled from data relating to production, foreign trade and changes in stocks.

Lamb

Production is likely to increase in the following countries: Ireland (10.2%), FR of Germany (3.6%), Spain (3%); a decline is expected only in France. Spain, as the second biggest producer of lamb in the EC (after the United Kingdom) will probably cross the self-sufficiency threshold in 1989.

Consumption of lamb should also increase further in 1989 (1.2%). Because consumption is growing less rapidly than production, the degree of self-sufficiency in the Community should increase to 83.2%.

Trade

Pigmeat

The EC's external trade in pigmeat continues to be characterized by declining imports and increasing exports. The main buying countries are Japan and the USA. The main suppliers are Hungary, East Germany and Sweden.

Beef and veal

In 1988 EC beef exports reached a volume of about 900 000 tonnes, 200 000 tonnes of which was from intervention stocks for suppliers under major contracts to Eastern bloc countries. Overall, it appears that a significant part of the sales from intervention stocks (with bones) amounting to about 442 000 tonnes were destined for export. For the current year, a decline of about 30% in the volume of exports to 600 000 tonnes, is expected. However, the EC will remain a net exporter.

EC imports in the beef sector in 1988 amounted to about 520 000 tonnes, which cut the EC export surplus back to about 380 000 tonnes compared to about 650 000 tonnes in the peak year of 1986. For 1989 a volume of imports of about 540 000 tonnes is forecast. This would reduce the export surplus to 60 000 to 100 000 tonnes.

Lamb

EC imports in 1988 amounted to 238 000 tonnes, the main suppliers being New Zealand (176 000 tonnes), Australia (15 000 tonnes), Hungary (11 000 tonnes) and Argentina (6 000 tonnes). The largest importers of third-country goods were the United Kingdom (135 000 tonnes), the Federal Republic of Germany (31 000 tonnes) and Italy (29 000 tonnes).

The main supplier to the Federal Republic of Germany was New Zealand (14 700 tonnes) followed by Poland (6 900 tonnes), Hungary (3 140 tonnes), Aus-

Table 6
Production of pork

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987	1988
EC (1)	9 960.0	10 093.6	10 064.4	11 909.8	12 068.6	12 134.8	12 364.5	12 750.8	N/A
Belgium	660.9	671.9	672.1	697.5	719.1	708.9	740.3	782.1	N/A
Denmark	966.4	987.0	985.5	1 043.0	1 034.4	1 083.3	1 144.1	1 148.8	1 167.6
FR of Germany	3 206.1	3 171.2	3 140.2	3 210.9	3 221.9	3 242.5	3 335.5	3 351.2	3 341.9
Greece	144.0	154.1	154.2	149.1	148.6	141.9	152.9	163.8	159.8
Spain	N/A	N/A	N/A	1 342.0	1 429.0	1 388.0	1 392.2	1 460.5	1 714.7
France	1 682.6	1 720.1	1 674.5	1 675.8	1 684.1	1 661.6	1 676.9	1 729.0	1 852.0
Ireland	153.4	149.9	153.3	160.9	143.6	135.6	137.1	140.8	142.4
Italy	1 085.5	1 105.8	1 108.1	1 166.0	1 218.1	1 188.2	1 172.2	1 230.6	N/A
Luxembourg	8.0	8.0	8.2	9.3	8.6	8.6	9.0	8.5	8.7
Netherlands	1 125.6	1 195.1	1 211.2	1 248.3	1 306.3	1 410.8	1 444.4	1 527.6	N/A
Portugal	N/A	N/A	N/A	200.0	208.0	197.0	170.6	189.6	182.6
United Kingdom	927.5	930.5	957.1	1 007.0	946.9	967.8	989.3	1 018.4	1 013.4

(1) 1980-82 EC 10.

Source: Eurostat (Zpa1).

Table 7
Production and external trade (1)
Pork

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987
Production	9 816	10 094	10 064	11 910	12 069	12 135	12 365	12 751
Index (2)	94.4	95.6	95.3	98.1	99.4	100.0	101.9	105.1
Imports extra-EC	127	109	118	98	148	174	113	113
Index (2)	102.3	82.8	89.7	56.3	85.1	100.0	64.9	64.9
Exports extra-EC	238	303	242	142	412	427	386	419
Index (2)	59.5	75.9	60.4	33.3	96.5	100.0	90.4	98.1
X/M	1.9	2.8	2.1	1.4	2.8	2.5	3.4	3.7

(1) 1980 EC 9; 1981-82 EC 10.
(2) Taking into account changes in EC membership.

Source: Eurostat (Zpa1).

Table 8
Production of beef

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987	1988
EC (1)	7 089.4	6 939.1	6 662.4	7 458.9	8 008.2	7 924.6	8 071.3	8 138.7	N/A
Belgium	302.4	309.5	274.1	282.0	309.6	316.8	316.5	316.7	N/A
Denmark	243.9	237.0	230.3	239.4	246.7	236.5	243.1	234.6	216.7
FR of Germany	1 570.0	1 537.8	1 477.2	1 494.3	1 613.5	1 575.7	1 695.7	1 680.5	1 608.3
Greece	N/A	93.9	89.8	85.9	84.8	82.0	81.7	85.6	81.8
Spain	N/A	N/A	N/A	422.0	398.0	401.0	437.2	444.5	444.9
France	1 837.6	1 836.2	1 745.4	1 811.0	1 991.7	1 893.2	1 910.8	1 960.1	1 825.9
Ireland	453.9	322.1	347.5	353.2	402.5	449.2	510.6	484.6	451.9
Italy	1 146.1	1 111.0	1 101.5	1 147.2	1 181.9	1 200.5	1 175.9	1 174.4	N/A
Luxembourg	8.3	8.2	7.5	8.9	9.6	9.3	9.8	9.3	7.6
Netherlands	418.6	437.4	420.2	450.3	514.8	510.9	539.4	546.5	N/A
Portugal	N/A	N/A	N/A	113.0	103.0	103.0	104.5	106.9	110.4
United Kingdom	1 108.6	1 046.0	965.9	1 051.7	1 152.1	1 146.5	1 046.2	1 095.0	945.5

(1) 1980 EC 9; 1981-82 EC 10.

Source: Eurostat (Zpa1).

Table 9
Production and external trade (1)
Beef

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987
Production	7 089	6 939	6 662	7 549	8 008	7 925	8 071	8 139
Index (2)	98.9	95.5	91.7	94.1	101.0	100.0	101.8	102.7
Imports extra-EC	408	371	387	454	421	491	434	445
Index (2)	105.1	80.7	84.1	92.5	85.7	100.0	88.4	90.6
Exports extra-EC	621	581	417	658	767	823	1 169	922
Index (2)	76.8	71.8	51.5	80.0	93.2	100.0	142.0	112.0
X/M	1.5	1.6	1.1	1.4	1.8	1.7	2.7	2.1

(1) 1980 EC 9; 1981-82 EC 10.
(2) Taking into account changes in EC membership.

Source: Eurostat (Zpa1).

Table 10
Production of lamb, mutton and goat meat

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987	1988
EC (1)	629.0	725.0	731.0	954.6	985.0	1 003.9	960.8	1 015.3	N/A
Belgium (2)	4.7	5.7	7.5	8.5	5.2	8.2	9.0	10.8	N/A
Denmark	.4	.4	.4	.4	.6	.8	.8	1.0	1.1
FR of Germany	29.6	27.7	27.3	29.4	28.4	27.2	25.5	29.4	29.1
Greece	N/A	120.8	120.0	121.1	130.1	122.4	106.5	124.5	125.1
Spain	N/A	N/A	N/A	202.0	207.0	210.0	210.2	217.9	229.9
France	182.0	182.6	192.8	182.9	178.8	177.6	169.1	169.8	160.5
Ireland	42.0	44.0	40.5	39.8	41.0	48.2	46.2	47.6	49.7
Italy	70.8	68.7	67.7	67.4	70.4	69.7	66.4	71.7	N/A
Netherlands	20.5	16.1	12.7	11.2	9.5	10.7	10.9	12.8	N/A
Portugal	N/A	N/A	N/A	27.0	26.0	25.0	25.0	27.0	N/A
United Kingdom (2)	278.6	259.0	262.1	286.8	288.0	304.1	291.2	302.7	346.9

(1) 1980 EC 9; 1981-82 EC 10.
(2) Estimated.

Source: Eurostat (Zpa1).

Table 11
Production and external trade (1)
Lamb, mutton and goat meat

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987
Production	629	725	731	955	985	1 004	961	1 015
Index (2)	98.9	95.0	95.8	95.1	98.1	100.0	95.7	101.1
Imports extra-EC	222	204	283	215	209	233	208	225
Index (2)	100.9	88.0	121.9	92.3	89.7	100.0	89.3	96.6
Exports extra-EC	6	6	5	10	6	6	3	13
Index (2)	116.7	116.7	100.0	166.7	100.0	100.0	50.0	216.7
X/M	.03	.03	.02	.05	.03	.03	.01	.06

(1) 1980 EC 9; 1981-82 EC 10.
(2) Taking into account changes in EC membership.

Source: Eurostat (Zpa1).

tralia (1 800 tonnes), Argentina and Uruguay (1 500 tonnes each).

Outlook

While beef and veal production is forecast to fall by 8% between 1986 and 1995, total meat production is expected to increase by 2%, the most marked increase being in pig meat production (6%). By 1995, beef and veal production is expected to make up only 28% of total meat production, compared with 31% in 1986.

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SLAUGHTERHOUSES

(NACE 412.1)

Summary

In theory, all slaughterhouses should be upgraded by 1992 to meet the EC-approved standards, but it seems likely that this will probably not happen in practice. Indeed, to raise standards to the required level, many smaller and medium-sized slaughterhouses will have to spend considerable amounts of money.

Nevertheless, many slaughterhouses are already equipped to EC standards. The Federal Republic of Germany has 350 slaughterhouses, 299 of which have an EC export licence. In the Netherlands, 69% of all slaughterhouses — 105 out of 153 — have similar status. In Belgium and France, too, more than half of all slaughterhouses are already up to EC standards. France has 358 export slaughterhouses — nearly 30% of the European total of 1 237.

Even so, it still seems likely that excess capacity could be over 50%. The actual excess might even be considerably higher as a result of the investment in new buildings and equipment currently under way.

Although more slaughterhouses are likely to close over the next few years as a result of reduced cattle slaughterings, competition for throughput is likely to increase and force down margins even further.

It will of course be the larger slaughterhouses that will find it easier to cope with the change.

Below, the situation of slaughterhouses in individual EC Member States will be considered.

Unfortunately, the European Slaughterhouses Union could not obtain descriptions of the situation in Greece, Portugal and Spain.

United Kingdom

Number of slaughterhouses

The number of slaughterhouses in the United Kingdom continues to fall. The number fell from 1 000 in 1985/86 to 980 in 1986/87 and to 852 in 1987/88. The contraction in the number of slaughterhouses in 1987/88 was in fact even larger than in previous years: 36% below the number 10 years ago.

In recent years, a marked decline in the number of smaller slaughterhouses, combined with expansion and mergers of medium and large plants (in order to benefit from economies of scale), explain that larger plants with throughputs of over 30 000 cattle units a year today account for an increasing proportion of total throughput. In 1986/87 142 large plants with throughputs of over 30 000 cattle units accounted for 72% of total slaughterings in terms of cattle units. In 1987/88 there were 138 of these large slaughter-

Table 1
Total meat production
Slaughterhouses

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987
EC (1)	24 128	24 101	23 959	28 145	28 897	28 918	29 472	30 428
Belgium, Luxembourg	1 225	1 246	1 221	1 257	1 320	1 335	1 366	1 415
Denmark	1 369	1 390	1 388	1 458	1 457	1 500	1 576	1 571
FR of Germany	5 559	5 484	5 387	5 445	5 587	5 568	5 814	5 850
Greece	520	570	548	562	559	560	537	579
Spain	N/A	N/A	N/A	3 088	3 140	3 130	3 108	3 266
France	5 661	5 733	5 677	5 710	5 876	5 734	5 817	6 013
Ireland	793	639	672	690	726	782	852	837
Italy	3 764	3 741	3 771	3 883	3 962	3 938	3 892	3 998
Netherlands	1 994	2 119	2 135	2 168	2 312	2 379	2 505	2 644
Portugal	N/A	N/A	N/A	568	542	525	577	630
United Kingdom	3 243	3 179	3 160	3 316	3 416	3 467	3 427	3 625

(1) 1980-82 EC 10.

Source: Eurostat (Zpa1).

Table 2
Number of slaughterhouses, 1987 (1)

	All slaughterhouses			EC-approved slaughterhouses	
	Number throughput (3)	Total throughput (4)	Average	Number	% of total
EC	6 973	118 790	17 036	1 237	18
Belgium	160	5 352	30 583	93	53
Denmark	273	8 976	32 879	51	19
FR of Germany (2)	350	25 455	72 729	299	85
Greece	430	3 912	9 098	7	2
Spain	476	14 337	30 120	46	10
France (2)	558	17 962	32 190	358	64
Ireland	854	3 136	3 672	45	5
Italy (2)	2 640	11 243	3 049	153	4
Luxembourg	6	92	15 333	6	100
Netherlands	153	11 215	73 301	105	69
Portugal	221	1 994	9 023	1	0
United Kingdom (2)	852	15 116	17 742	73	9

(1) Except for United Kingdom (year ending March 1988).
(2) As at October 1988, based on estimate for number of slaughterhouses.
(3) 1 000 cattle units.
(4) Cattle units.

Source: UEEA, MLC, Ofival, Istat.

houses, and these accounted for 74% of total slaughterings. The market share of the largest slaughterhouses with throughputs of over 100 000 has increased even more markedly; in 1987/88 there were 27 slaughterhouses in this category, which accounted for 30% of total throughput.

As a proportion of the total number of slaughterhouses, the number of plants with average throughputs of less than 10 000 cattle units a year has fallen since 1977/78. The proportion of total throughput accounted for by these smaller slaughterhouses has fallen from 13.7% to 8.7% over this period. The relative importance of the larger plants consequently increased. However, in absolute terms, the only categories of slaughterhouses whose number has increased are those with throughputs of 50 000 to 100 000 (from 51 to 59) and those with throughputs of over 100 000 (from 12 to 27). The quality of distribution has, however, remained similar.

The increases in throughput combined with the drop in the number of slaughterhouses means that average slaughterhouse throughput is continuing to increase considerably and, at 15 195 cattle units in 1987/88, was very nearly twice the average size 10 years ago.

Out of the 933 slaughterhouses paying levy during 1987/88, 93% killed sheep while almost as many (91%) killed cattle. The number of slaughterhouses killing pigs was lower (76%) and pig production tends to be more concentrated in particular regions of the country. During the last few years, the percentage change in the number of slaughterhouses killing cattle, sheep or pigs have been very similar. However, the decline in the number of slaughterhouses killing calves has been somewhat greater and in 1987/88 only 47% of the total number of slaughterhouses killed calves.

The more marked decline in the number of slaughterhouses killing calves can be traced back to the drop in total calf throughput. Calf slaughterings in 1987/88 dropped to only 38 000 units, the lowest recorded, due to reduced dairy calf births combined with increases in exports and demand for finishing from United Kingdom producers. Initial expectations are that there will be a further drop in total calf throughput in 1988/89.

The degree of concentration in slaughterings is greater in the pig sector than for other species.

Cattle slaughtering is less highly concentrated than sheep or pig slaughtering and there are more small slaughterhouses killing cattle than the other species.

Outlook

Overall, the output of medium and large slaughterhouses is likely to depend on the growth of demand on export markets or more selling to distant parts of the United Kingdom after 1993.

For some of the larger slaughterhouses killing more than 50 000 cattle units a year, the single market may

not require many changes, especially as nearly half already have EC export approval.

The Netherlands

The importance of the agricultural sector for the Dutch economy is illustrated by the fact that approximately one quarter of its total exports are farm products.

The Dutch trade balance shows a positive result of not more than ECU 1.1 billion. Yet, the agricultural balance amounts to not less than approximately ECU 7.7 billion.

Within agriculture, the livestock and meat sector is of crucial importance. In 1988 the total value of exports amounted to almost ECU 3.4 billion, and the sector showed a positive trade balance of about ECU 2.7 billion .

Despite the economic importance of the livestock and meat sector, its growth has been very low in recent years. Total Dutch meat production has stabilized at a level of about 2.5 million tonnes. The strong reduction in the number of slaughterings for beef (-10.2%) and veal (- 8.4%) was just offset by an increase in pigmeat production (+2.6%) and higher average slaughter weights.

Total slaughterings in the Netherlands break down as follows: 88% pigs, 2% lambs, and bovine animals and calves 5% each.

Exports are increasingly destined for other EC countries, as the Netherlands have lost ground on the world market, partly because of the low dollar rate. In 1988 about 70% of the Dutch meat production was exported. 95% of all meat exports are destined for other EC countries, the main export markets being: FR of Germany (31% of Dutch meat exports), Italy (22%), France (15%), and the United Kingdom (11%).

As a result of reduced supplies and difficulties caused by the low dollar rate and competition from subsidized US exports of breeding cattle, exports decreased in volume terms. Actually, over recent years, the Netherlands has become a net importer of live cattle.

Reduced production also resulted in an increase in imports of meat and meat products. Despite lower exports and increased imports, considerably higher export prices helped the positive trade balance of the sector to stabilize at approximately ECU 513 million.

The growth rate of the pigmeat sector has considerably declined, mainly because of the low producer price levels and the environmental measures taken in the sector. Exports increased by 2.3% in volume terms but decreased by 1.4% in value as a result of a small drop in prices. Nevertheless, the trade balance of the pigmeat sector still made a positive contribution of approximately ECU 1.9 billion to the Dutch economy.

There is an enormous increase in exports of cheap piglets (+76%) and a fall in the total number of exported slaughtering pigs (-16%).

This shows that the Dutch slaughtering pig sector is competitive. In relative terms, live exports indeed decreased from 26 to 22% within total exports.

Especially worth mentioning are exports of bacon which have shown a strong increase (+11%).

Federal Republic of Germany

The slaughterhouse sector in the FR of Germany, as in the other countries of the Community, is characterized by considerable overcapacity, leading to stiffer competition and a growing tendency towards concentration. According to estimates, the three largest slaughtering firms account for some 50% of the sector's total revenue of ECU 3.7 billion.

In 1988 slaughterhouses (excluding communal slaughterhouses) achieved net sales of ECU 3 960 million compared to ECU 3 936 million in 1987.

This turnover was achieved by the 161 private and cooperative slaughterhouses; there are in addition about 100 communal slaughterhouses, and slaughterhouses for which no statistics exist, since they have fewer than 20 employees. In 1988 the total number of slaughterhouses in the Federal Republic was 299.

The figures for those employed in the 161 slaughterhouses for which statistics are available was 13 168 on a monthly average in 1988, compared to 12 652 in 1987. But the available figures show relatively little change: about 60% of the turnover of the total of 99 firms (not slaughterhouses) is accounted for by the 10 largest slaughterhouse firms in Germany.

In Germany, production of beef and veal in kilogram per head is expected to remain stagnant, with a slight increase in the volume of total use. This reflects the diminishing population and the increasing use of meat outside the food sector. For 1989, a degree of self-sufficiency of about 111% is

forecast for the Federal Republic. Exports of fresh and frozen beef from the Federal Republic to other Member States amounted to 276 764 tonnes in 1988, compared to 280 000 tonnes in 1987. The main countries receiving these exports were unchanged: Italy, France (each with a share of about one-third) and Greece (with a share of about 20%).

Third-country exports from the Federal Republic of Germany were able to be increased in 1988 to 155 000 tonnes. Main purchasing countries were Egypt (26% share), Poland, Yugoslavia, Iran and the Soviet Union.

Imports of fresh/frozen beef into the Federal Republic of Germany in 1988 reached a volume of just 225 000 tonnes, 165 000 tonnes of this from Member States and 60 000 tonnes from third countries. With a share of just 50%, Argentina was again the largest third-country supplier in 1988.

Denmark

During recent years a reduction in the industry's turnover has occurred. However, these tendencies have come to a stop so that turnover will be quite stable for the years to come.

Profitability levels are low, therefore the investment climate is dull.

The yearly supplies from non-EC approved slaughterhouses in Denmark are only 283 020 pigs, corresponding to 1.8% of the total Danish supplies in pigs.

Consumption trends are stagnating. However, a shift from low-quality to high-quality products is taking place.

As Denmark is exporting about 70% of its production, it is very dependent on export markets. Processed products have been replaced by fresh/frozen products. The export trade is in the hands of about 30 export firms but some of the large slaughterhouses and processing plants export direct.

Other EC countries take 85 to 90% of exports of Danish beef or beef products. Future developments will have to take account of the current over-production in certain sectors.

Exports to third countries are increasing. Denmark's export of beef and veal in percentage distribution to the major destinations was:

	1987	1988
Italy:	50.2	47.1
FR of Germany:	11.2	16.1
Other EC countries:	8.1	13.0
Third countries:	30.5	23.8

The number of persons working in slaughterhouses grew from 16 880 in 1985 to 27 600 in 1986, but then fell in both 1987 and 1988 to reach 15 700 in this latter year.

The reduction in the number of slaughterings in the coming years will probably only have a minor effect on employment in the industry. The development of high added-value products may offset any adverse effects within the processing sector.

Of the 273 slaughterhouses in Denmark, the vast majority of pig slaughterings are concentrated in just 30 meat plants. These meat plants are owned by nine companies, of which eight are cooperative. The export-authorized slaughterhouses receive yearly supplies of pigs of approximately ECU 15.8 million.

Italy

The continuing fall in the number of slaughterhouses is indicative of the difficult situation in Italy.

Two difficulties may arise in the natural development and the reorganization of the sector. First, the complexity and inflexibility of measures regarding health, with rules which are likely to increase costs, and secondly, the fact that national authorities have been unable to prepare a comprehensive overall programme intervening, if at all, solely to support certain cooperative ventures which do not have the necessary economic basis. This has led to detrimental commercial discrimination.

Large-scale slaughterhouses have developed in the last 15 to 20 years in an important effort to be up to the European level.

According to the latest Istat figures, there are some 2 700 active slaughterhouses. 1 900 public sector slaughterhouses process 20 to 25% of national production, 770 private firms and cooperatives process 65 to 70%. The remainder is processed by local firms.

Actually no updated reliable statistics exist in Italy on slaughterings, slaughterhouse capacity or the breakdown between public, private and cooperative slaughterhouses. All data available relate to 1983 on, with various, clearly incomplete, annual updatings.

The latest estimates indicate a considerable difference in efficiency between public and large-scale private slaughterhouses. While the latter represent about 45% of the total number, they only account for 25% of throughput. On the other hand large-scale private slaughterhouses represent only 13% of the total number but process 35% of production.

Belgium

The Belgian slaughterhouse sector has, over the last few years, seen profound modifications.

Implementation of Directive 83/90/EEC, an amendment to Directive 64/433/EEC relating to intra-Community exchanges of fresh meats gave the public health veterinary inspectors the opportunity to revise all the export approvals granted to slaughterhouses.

A complete report has been made of the situation within slaughterhouses approved for export. Overall, the final assessment was pessimistic; a few large pigmeat slaughterhouses aside, all the others needed far-reaching reforms, if not total reconstruction.

A complete plan for restructuring the whole slaughterhouse sector has been worked out with the purpose of bringing the structure and equipment of Belgian slaughterhouses to a satisfactory standard within five years. This plan consists of different stages, including approval by the central veterinary administration under the Ministry of Health of plans for converting plants wishing to keep their export approval, and transformation or reconstruction of slaughterhouses according to the approved plans.

Each stage has resulted in the withdrawal of the export approval for those who either did not want to convert or failed to put forward plans which could be acceptable to the veterinary authorities; thus, at this moment, 50 slaughterhouses have already lost their export approval altogether, while 16 others have lost it either for cattle or for pigs.

At present, conversion or reconstruction work is in full swing: a good 50% of the slaughterhouses have finished their building work, the rest are entering the final phase and it can be hoped that, apart from one or two exceptions, the 1990 deadline will be met.

The final cost of the reforms is unknown, but it will without doubt exceed ECU 200 million, that is, an average of more than ECU 2.5 million per slaughterhouse.

The scope and cost of these reforms have given rise to regroupings and increases in the numbers of killings in slaughterhouses which have adapted — the only way to make the building work carried out profitable. However, at present, certain converted units remain in a difficult economic position because their numbers of killings still lie below the profitability threshold, and one can fear for their future, especially if slaughterhouses approved for the national market only are to continue without conversions.

It is in this light of overall improvement in public health that the decision of the Belgian Ministry of Health to force slaughterhouses approved for the national market to adapt to EC standards by 1 July 1990 must be seen.

Ireland

The structure of the meat industry in Ireland has undergone substantial change over the past decade. The emergence of a small number of large meat companies (in some cases engaged in a mixture of beef, lamb, pigmeat and/or fish processing) is very noticeable. Increased emphasis has been placed on value-added products and the development of a downstream processing industry.

Investment in the industry tends to be very high and profit margins in recent years have been very tight.

The beef industry is Ireland's single most important industry, accounting for over 10% of the total national exports. Unlike other EC Member States, beef and milk production in Ireland are very much interlinked.

The seasonal pattern of beef slaughterings (46% of annual killings in the three months September, October and November) results in a considerable under-utilization of processing facilities for a large part of the year. Employment within the industry also follows a seasonal pattern.

Exports of beef, live cattle and sheepmeat from Ireland were valued at ECU 1.16 billion in 1988.

Cattle slaughterings peaked in 1986. The heavy level of disposals in that year reflected cutbacks in the dairy cow population as a result of reductions in milk quotas. In 1987 slaughterings fell by over 6% and fell again by 9% in 1988. Total cattle slaughterings at meat export premises were 1.23 million head in 1988 as compared to 1.43 million head in 1986.

In contrast, sheep slaughterings in Ireland have shown a steady increase in recent years. Slaughterings for export increased by 8.6% in 1988 to reach a record level of 1.42 million head. Of the 25 350 tonnes of sheepmeat exported in 1988, 92% of it was sold on the French market.

Pig slaughterings increased by 4% in 1988. Irish exports of pork and bacon in 1988 reached 39 000 tonnes, a 5% increase on the 1987 level. The big increase was in pork where exports rose by 6% to 25 000 tonnes.

Of the 370 300 tonnes of beef and veal exported from Ireland in 1988, the UK accounted for 36% of beef exports, the continental EC for 14%, with 50% of total beef exports being sold to markets outside the EC.

France

Some 36 million animals were slaughtered by 602 firms in France in 1986, 22 firms and 11 500 animals fewer than in 1985. This corresponds to a total of 3 473 million tonnes compared to 3 461 million tonnes in 1985, a rise of 0.3%.

Total tonnage has been growing by 18% annually between 1969 and 1986, whereas the number of firms has dropped from 1 393 to 602. In 1988, 558 slaughterhouses were reported.

Slaughtering is divided between the private and the public sector, which are developing in completely different directions, both in the number of slaughterhouses and the volume processed. The number of public sector slaughterhouses is falling (from 745 in 1975 and 452 in 1986), while the number in the private sector rose continually until 1985 (from 135 to 151 in 1975, then 150 in 1986).

Volume processed follows the same trend which has been falling in the public sector since 1975. Approximately one-third of all slaughtering was done in the private sector in 1985; in 1986 this had already risen to a half, accounting for 1 716 million tonnes of meat (49.4%) as against 1 757 million tonnes (50.6%) in public slaughterhouses.

The breakdown of total volume slaughtered is as follows:

- 43.8% beef (62% public, 38% private);
- 41.3% pork (32% public, 68% private);
- 9.8% veal (66% public, 43% private);
- 4.5% sheep and goats (80% public, 20% private);
- 0.6% solid-hoofed animals (79% public, 21% private).

The public sector is dominant except in the pigmeat sector.

The beef and veal sector is the most significant, representing 53.6% of total volume.

61% of the 602 slaughterhouses existing in 1986 had export licences, processing 3 225 million tonnes (93% of total volume). 41% were in the public sector, processing 1 612 million tonnes, 20% in the private sector, processing 1 614 million tonnes. Thus 223 firms, processing 247 645 tonnes (7% of total volume), did not have export licences. In 1988, 64% of the 558 slaughterhouses had export licences.

Over the period 1970-85, average tonnage rose from 2 033 tonnes per year to 5 769 tonnes per year, an annual growth of 6.7%.

The trend towards concentration is continuing as a result of various modernization measures on the one hand and increasing capacity in certain firms on the other, leading to the closure of many — mostly small firms.

It should be pointed out that an increasing number of public sector slaughterhouses are managed by private firms, meaning that almost the entire tonnage is in effect accounted for by the private sector.

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POULTRY

(NACE 412.3)

Summary

Since the establishment of the European Community, the structures of the poultrymeat sector have changed considerably, like those of other agricultural and industrial sectors. The trend has been towards an increasing volume of production, differentiation of products and concentration of production, both geographically and in structural terms. The outlook for growth in the world market in general and the European market in particular is very favourable. There are two reasons for this: the first is due to the price difference from other meats, and the second stems from a growing consumer preference for poultry due to its taste and nutritional value.

Current situation

In 1988, the EC produced almost 6 million tonnes of poultrymeat and exported 408 000 tonnes. The rate of self-sufficiency is 105.7%. Broiler chickens represent about 75% of total production.

Turkey meat is the second most important poultry product. The figures show that in 1988 the EC produced 953 000 tonnes of turkey meat, which represents an increase of 6.8%, compared with 1986. The per capita consumption of turkey meat in the EC is about 2.8 kg per annum.

By comparison with other agricultural sectors, the poultrymeat sector of the EC is subject to very liberal market organization. There are no guaranteed prices or intervention systems, nor does the poultrymeat sector have any system providing aid to private stocks. In principle, poultrymeat can therefore move freely from one Member State to another. As far as trade relations with third countries are concerned, the present market organization for poultrymeat includes a system of export refunds to compensate for the difference in cereal prices at world market

Table 1
Main indicators, 1980-88 (1)
Poultry

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987	1988
Apparent consumption	3 763	3 781	4 036	4 919	5 000	5 137	5 199	5 491	5 667
Net exports	257	416	361	369	275	214	250	297	326
Production	4 020	4 197	4 397	5 288	5 275	5 351	5 449	5 788	5 993

(1) 1980-82 EC 10.

Source: AVEC, Eurostat (Zpa1, Comext).

Table 2
Turkey meat, 1988 (1)

	B-L	DK	D	GR	E	F	IRL	I	NL	P	UK	EC
Production (1 000 tonnes)	4	2	96	3	16	331	22	250	27	28	174	953
Consumption per capita (kg)	1.2	.3	2.4	.3	.6	4.6	4.3	4.3	1.2	2.9	2.9	2.8

(1) Estimated.

Source: AVEC.

Table 3
Chicken meat, 1988 (1)

	B-L	DK	D	GR	E	F	IRL	I	NL	P	UK	EC
Production (1 000 tonnes)	132	101	229	136	762	843	57	593	396	170	795	4 214
Consumption per capita (kg)	13.7	9.1	6.6	13.4	19.7	10.6	13.7	10.4	12.2	17.0	14.7	12.1

(1) Estimated.

Source: AVEC.

level and within the European Community, as well as a system of sluicegate prices and import levies to prevent products from third countries being imported at unfair prices.

The poultrymeat sector in the EC also differs in other respects from other agricultural sectors. For instance, there is no possibility of obtaining aid for the establishment of poultry farms, except in cases where environmental protection is involved. Aid from public funds may be granted for modernization of slaughtering plants, but not for an increase in productive capacity. In its administration of the market organization, the EC Commission makes every effort to ensure that products can move as freely as possible from one market to another.

In 1971, the EC Commission presented a proposal for a Council Regulation on marketing standards for poultrymeat. That proposal was never adopted, but its main principles were later adopted by the United Nations' Economic Commission for Europe and have now been tested in practice for three and a half years, with good results. The UN/EC marketing standards are subject to current revisions made on the basis of practical experience. The EC Commission is now preparing a new proposal for marketing standards.

Common EC standards for the water content of frozen poultrymeat are laid down in a Council Regulation. These standards determine the maximum water content in poultrymeat, but certain misunderstandings have arisen due to different testing methods, and the EC Commission has now taken steps to carry out experiments in several Member States to decide whether it will be necessary to amend the Council Regulation of 1976 on water content. The main object is to remove any obstacles to intra-Community trade that may be due to different testing methods.

The rules on health inspection of poultrymeat are laid down in a Council Directive on health problems affecting trade in fresh poultrymeat. However, the interpretation of the provisions of this directive differs considerably from one member country to another, and so do the inspection charges paid by the processing plants in the various member countries. In order to harmonize these charges, the EC Commission has presented a proposal for a Council Directive laying down a minimum fee to be collected for health inspection in all member countries.

Production and consumption

Since the last critical period in 1982-83, the poultrymeat sector has made great efforts to keep production in step with the market demand. Although consumption has increased from 3.7 million tonnes in 1980 to 5.7 million tonnes in 1988, the threat of over-production has had the effect of depressing the price of poultrymeat.

This should also be seen in the light of the situation on export markets. The keen competition in the world market, especially from the USA, has made it very difficult for European exporters to dispose of production surpluses in third country markets.

In 1985, the USA included poultrymeat in their Export enhancement programme and since then, the substantial subsidies granted to American poultrymeat exporters have made it possible for them to gain access to traditional European export markets. In 1986, American broiler exports increased by 30%, and the same happened in 1987. The consequences

Table 4
Production and external trade (1)
Poultry

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987	1988
Production	4 020	4 197	4 397	5 288	5 275	5 351	5 449	5 788	5 993
Index (2)	75.1	78.4	82.2	98.8	98.6	100.0	101.8	108.2	112.0
Imports extra-EC	77	48	65	76	94	111	77	105	125
Index (2)	84.7	53.2	72.1	68.5	84.7	100.0	69.4	94.6	112.6
Exports extra-EC	342	468	450	450	375	350	327	379	408
Index (2)	104.0	134.6	129.4	128.6	107.1	100.0	93.4	108.3	116.6
X/M	4.4	9.8	6.9	5.9	4.0	3.2	4.2	3.6	3.3

(1) 1980-82 EC 10.
(2) Taking into account changes in EC membership.
Source: Eurostat (Comext).

Table 5
Production of poultry

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987	1988 (2)
EC (1)	4 020	4 197	4 397	5 288	5 275	5 351	5 449	5 788	5 993
Belgium, Luxembourg	133	133	147	128	126	131	134	141	146
Denmark	97	104	110	112	110	115	116	113	118
FR Germany	390	392	395	344	351	357	377	369	411
Greece	120	146	124	153	152	155	145	149	153
Spain	N/A	N/A	N/A	813	789	815	754	786	826
France	1 132	1 236	1 331	1 284	1 251	1 267	1 328	1 408	1 434
Ireland	50	49	52	53	52	55	59	67	72
Italy	1 013	1 015	1 047	1 043	1 020	998	1 001	1 046	1 057
Netherlands	337	377	384	399	410	425	442	471	485
Portugal	N/A	N/A	N/A	162	155	157	163	189	201
United Kingdom	748	745	807	798	858	876	930	1 029	1 093

(1) 1980-82 EC 10.
(2) Provisional.

Source: AVEC, Eurostat (Zpa1).

of the American export policy could have been disastrous for the European poultrymeat industry if the EC Commission had not granted an increase of EC export refunds.

Outlook

As far as the demand for poultrymeat is concerned, per capita consumption in the EC increased from 10.6 kg in 1976 to 17.5 kg in 1988. A further increase may be expected; in the USA the per capita consumption has now reached a level of no less than 37.3 kg. Poultrymeat is gaining an increasing share of total per capita consumption of meat in all important parts of the world, and this development is expected to continue. In several important markets, poultrymeat is even expected to be the most common kind of meat, and consumption of poultry meat continues to increase even in periods when prices go up.

At the same time, however, international trade in poultrymeat continues to decrease. One of the reasons for this decline is increasing home production in traditional export markets, for instance in a number of Middle Eastern countries, where a considerable increase in poultry production is expected. Recent consumer inquiries seem to indicate that future generations will have a preference for poultrymeat because of its special culinary and nutritional qualities. The rapid evolution in the field of processed poultry products also predicts a fairly bright future for the poultry sector. Competition is certain to intensify, however, and the European poultrymeat sector must be prepared for an uncertain situation,

Table 6
Human consumption per capita of poultry

(kilograms)	1980	1981	1982	1983	1984	1985	1986	1987	1988 (1)
EC	N/A	N/A	N/A	15.6	15.6	15.9	16.2	16.8	17.5
Belgium, Luxembourg	13.0	13.2	14.9	15.0	14.6	15.4	16.2	16.3	16.4
Denmark	8.2	8.6	9.6	9.8	9.8	11.0	11.7	11.7	11.8
FR Germany	9.9	9.7	9.9	9.3	9.5	9.7	10.1	10.5	11.2
Greece	12.0	14.9	12.8	15.6	15.7	15.7	15.2	15.6	16.0
Spain	N/A	N/A	N/A	21.6	21.0	21.8	19.7	20.7	21.7
France	16.7	16.6	16.8	17.7	17.3	17.7	18.8	19.8	20.1
Ireland	14.4	14.2	14.9	16.0	15.6	17.2	18.4	20.0	20.5
Italy	18.1	18.1	18.6	18.6	18.2	18.0	17.9	18.5	18.7
Netherlands	9.0	9.5	11.5	11.1	11.9	12.7	13.4	14.7	15.0
Portugal	N/A	N/A	N/A	17.1	16.1	16.9	18.4	19.8	20.5
United Kingdom	13.4	13.4	14.5	14.7	15.7	16.2	17.3	18.4	19.4

(1) Provisional.

Source: AVEC, Eurostat (Zpa1).

both at national and international level, and plan its future production very carefully according to the market trend. In the long run, however, there is no doubt that poultrymeat will gain an increasing share of the total meat market.

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DAIRY PRODUCTS

(NACE 413)

Summary

The principal dairy products manufactured in the EC are liquid milk, butter (and butteroil), cheese (natural and processed), fresh products (cream, fermented milk, desserts, fresh cheese) and preserved milk (principally skimmed and whole milk powder, sweetened condensed and evaporated milk); other such as casein and whey products are less significant in certain EC Member States, but are growing in importance as the use of ultrafiltration spreads, allowing dairies greater manufacturing flexibility by breaking milk down into higher value-added components.

Current situation

Cheese consumption continues to grow slowly, although consumption of fresh cheese, cream and fermented milks (particularly yoghurt) is expanding at a slightly faster rate. Overall, butter consumption has fallen slightly as mixed fat products develop a niche for themselves in an increasing number of Member States. Liquid milk consumption is stagnating, although this masks a trend toward increased consumption of low-fat milks to the detriment of full-cream milk. Production of low-fat milk powder has fallen since the introduction of milk quotas and since 1987, when the EC intervention was modified to restrict access according to time and price criteria.

Major structural and geographical features

The main milk-producing areas by Member State are in the west in Denmark (Jutland and Fuennen) and the United Kingdom (West Country, Shropshire, Cheshire, Lancashire), and in France (Basse Nor-

Table 1
Main Indicators, 1980-89 (1)
Dairy products

(million ECU)	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Apparent consumption	33 157	35 858	39 971	44 395	45 825	47 558	52 579	53 743	56 250	N/A
Net exports (2)	2 561	3 176	3 229	2 754	3 607	2 903	2 172	2 532	3 352	N/A
Production	35 718	39 034	43 200	47 149	49 432	50 461	54 751	56 275	59 592	63 555
Employment (number)	257 759	250 845	249 391	252 389	249 659	241 072	264 523	261 647	260 352	259 803

(1) 1980 EC 9; 1981-85 EC 10; 1986-89 EC 12 (estimated).
(2) 1988: excluding Greece.

Source: Eurostat (Inde, Bise, Comext).

Table 2
Production

(million ECU)	1980	1981	1982	1983	1984	1985	1986	1987 (1)	1988 (1)	1989
EC (2)	38 350	41 860	46 340	50 243	52 896	54 154	54 751	56 275	59 592	63 555
Belgium, Luxembourg (2)	1 306	1 425	1 594	1 855	1 962	2 187	2 192	2 183	2 394	2 573
Denmark	1 531	1 713	1 927	2 295	2 461	2 447	2 441	2 394	2 505	2 650
FR of Germany	8 372	8 782	10 053	11 367	11 174	11 086	11 824	11 767	12 187	12 404
Greece (2)	201	256	293	315	529	393	377	363	437	467
Spain (3)	2 146	2 468	2 709	2 654	2 958	3 096	3 315	3 169	3 440	3 667
France	9 704	11 033	11 967	12 712	13 809	14 963	15 740	16 409	17 608	18 967
Ireland (3)	1 284	1 447	1 714	1 966	2 072	2 271	2 279	2 441	2 672	2 876
Italy	2 629	3 128	3 619	4 581	6 029	5 744	5 619	6 004	6 678	7 009
Netherlands (3)	5 183	5 296	5 139	5 139	4 598	4 370	3 965	3 892	3 213	3 437
Portugal (3)	285	358	431	440	506	597	644	660	691	737
United Kingdom	5 709	5 955	6 894	6 919	6 798	7 001	6 355	6 993	7 768	8 768

(1) Estimated.
(2) 1984-88 estimated.
(3) 1986-88 estimated.

Source: Eurostat (Inde).

mandie, Bretagne, Pays de la Loire), in the north in Spain (Santander, Galicia, etc.), in Greece (Macedonia, Thraki), in Portugal (north of the Douro river), and in Italy. In the Federal Republic of Germany and Ireland, milk production is concentrated in the southern part of the country (Bavaria and Baden-Wurtemberg; Munster and Leinster); it is fairly evenly spread throughout Belgium and the Netherlands.

From the last study published by the Commission ('Structure of the dairy industry in the Community in 1985 and changes since 1982', EC Commission DG VI) there was a clear trend showing decline in the number of dairies collecting less than 20 000 tonnes of milk and an increase in those collecting over 50 000 tonnes.

Production costs

Over 1987 production of butter (national costs weighed by production expressed in ecu — converted at green rates) increased slightly (+0,56%) in the EC as a whole; costs of skimmed-milk powder fell a little (-0,72%) whilst those of collection fell slightly more (-2,55%).

The cost of industrial fuels in national currencies fell some 11% on average in the EC; electricity costs fell 8,3% while gasoil fell almost 25%. (The inclusion of Dutch costs — about 25% lower than other EC countries — reduces the EC average considerably.)

Packaging prices for sulphurized paper rose slightly, but were offset by a fall in the price of cardboard, so that butter-packaging costs overall fell slightly (-1.6%). Bulk powder packaging costs increased 3.3% on average.

Personnel costs per hour, expressed in national currencies as cost to employers, rose on average 4.63% for a pasteurizer operator, 8.25% for a butter maker, 7.66% for a milk-powder-plant operator and 7.68% for a milk collection driver.

Retail prices

The EC Commission's successful efforts to reduce considerable EC intervention stocks of butter and skimmed-milk powder (smp) in 1986 and 1987, together with the tightening up of milk supplies owing to the application of quotas, have caused prices to stabilize in a number of dairy product sectors, notably those sectors competing for milk proteins: milk powder, casein and cheese. Retail prices in the fresh dairy product sector fell slightly in 1987 in all countries except Belgium and the UK. In the two largest product markets, the Federal Republic of Germany and France, where inflation was about + 1.5% and 3% respectively, prices fell by 1% in Ger-

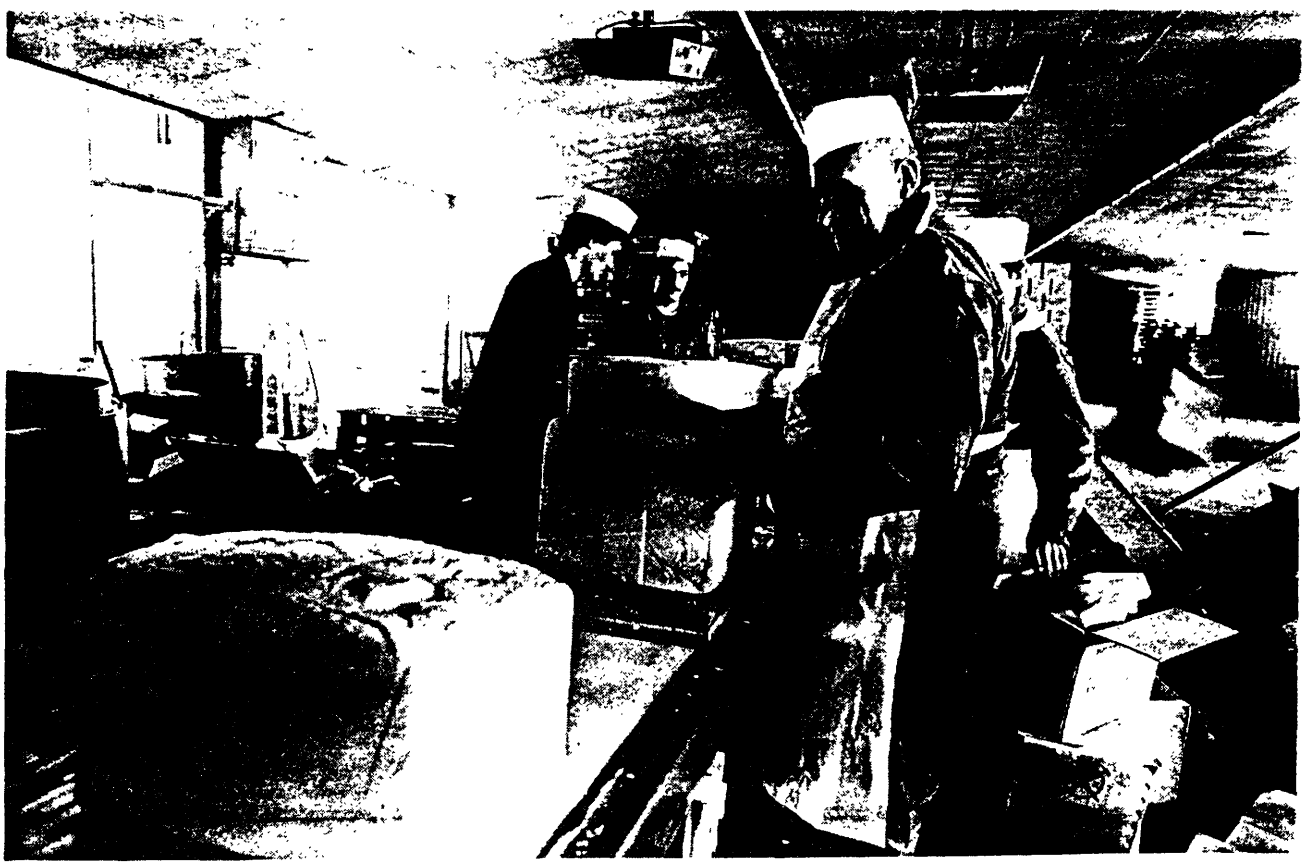

Table 3
Butter and butteroil production

(1 000 tonnes)	1983	1984	1985	1986	1987	1988	1989	1990
EC	2 316	2 139	2 062	2 236	1 911	1 693	1 620	1 598
Belgium	105	102	97	100	86	75	76	76
Denmark	131	104	110	112	196	94	89	87
FR of Germany	628	574	517	567	466	392	380	375
Greece	3	4	5	11	12	12	12	12
Spain	17	17	17	29	29	24	19	19
France	632	606	595	652	577	520	500	485
Ireland	159	166	162	154	134	122	111	111
Italy	78	81	80	80	84	83	81	80
Luxembourg	8	8	8	8	7	7	6	6
Netherlands	306	266	263	292	235	215	205	205
Portugal	7	6	7	9	9	10	10	10
United Kingdom	242	206	202	222	176	140	131	131

Source: Eurostat (Zpa1).

many and more in France. This was thought to reflect the growing concentration and power of large retail chains. Cheese prices firmed up in 1987 as increased competition for a raw material, especially milk protein, caused raw milk prices to rise. Whilst most cheese prices were flattening out earlier in 1988, those for speciality cheeses and Emmental continued to rise which meant that raw material prices for processed cheese increased.

Meaningful up-to-date milk producer price information is not available in many EC Member States; partly because many dairies, private and cooperative alike, operate 'on account' payment systems with a 13th month or bonus payment being made after the financial year end, and partly because many companies keep such information confidential.

- Butter

The substantial reduction in EC intervention stocks has helped relieve pressure on market prices, although these are not rising at the same rate as those in the skim sector where demand is high in a number of product areas.

EC butter consumption is expected to fall slightly in 1988 mainly due to expansion of the mixed fat product market as more Member States open their markets to such products.

On the export market, prices have firmed up only slightly, despite the EC's action of disposing of public stock, since butterfat is in surplus world-wide.

- Cheese

Overall consumption continues to grow slowly, although this masks a variety of different trends within the market: semi-hard cheese sales continue to be buoyant whilst hard and blue vein cheese sales are now slipping slightly. Soft cheese sales continue to be stable. Processed cheese sales, whilst holding up well in the Community, suffered greatly in third countries buying in USD and especially in Middle

Table 4
Butter consumption

(1 000 tonnes)	1983	1984	1985	1986	1987	1988	1989	1990
EC	1 580	1 649	1 670	1 659	1 676	1 653	1 557	1 506
Belgium	82	85	83	80	83	83	83	83
Denmark	52	61	59	57	52	52	51	50
FR of Germany	399	427	461	482	506	514	470	440
Greece	6	7	10	17	16	16	16	16
Spain	17	17	18	17	18	17	17	18
France	482	524	511	526	520	490	460	440
Ireland	41	39	31	25	25	22	21	21
Italy	123	129	138	129	137	138	138	138
Luxembourg	5	5	4	3	3	3	3	3
Netherlands	50	56	58	59	58	58	58	58
Portugal	8	8	7	9	9	10	10	10
United Kingdom	315	290	290	255	250	250	230	230

Source: Eurostat (Zpa1).

Eastern oil-producing nations. Other cheese exports held up well and prices firmed up. Although a number of cheeses are now available in 'lower fat' form, such products are marginal to mainstream business. Cheese substitutes similarly remain peripheral to this sector. However, the EC Commission's decision in 1988 to fund, from co-responsibility funds, a feasibility study concerning the use of a

Table 5
Natural and processed cheese production

(1 000 tonnes)	1983	1984	1985	1986	1987	1988	1989	1990
EC	4 157	4 342	4 435	4 489	4 628	4 759	4 792	4 829
Belgium	43	44	51	51	56	60	62	62
Denmark	251	295	256	254	272	260	265	270
FR of Germany	847	878	913	924	955	1 008	1 020	1 030
Greece	172	179	182	203	205	210	210	210
Spain	152	153	159	162	157	160	160	160
France	1 230	1 273	1 307	1 326	1 360	1 386	1 409	1 431
Ireland	52	55	78	63	65	73	75	75
Italy	636	659	667	670	697	691	669	664
Luxembourg	3	3	3	3	3	3	4	4
Netherlands	497	526	533	546	563	572	577	580
Portugal	28	29	30	30	31	38	41	43
United Kingdom	245	246	256	258	264	298	300	300

Source: Eurostat (Zpa1).

Table 6
Consumption of cheeses

(1 000 tonnes)	1983	1984	1985	1986	1987	1988	1989	1990
EC	3 866	3 959	4 148	4 205	4 351	4 433	4 475	4 527
Belgium	112	113	116	121	123	124	125	125
Denmark	57	63	58	64	64	66	67	67
FR of Germany	821	836	884	909	943	985	985	1 000
Greece	200	204	209	228	229	230	230	230
Spain	163	167	174	180	185	194	195	195
France	1 035	1 086	1 152	1 133	1 208	1 225	1 240	1 255
Ireland	13	13	14	14	16	16	16	16
Italy	864	876	935	909	935	935	935	935
Luxembourg	5	5	5	5	5	5	5	5
Netherlands	192	202	200	212	218	218	220	222
Portugal	28	30	30	36	37	39	42	44
United Kingdom	379	364	371	394	389	398	416	433

Source: Eurostat (Zpa1).

Table 7
Liquid milk (drinking milk) production

(1 000 tonnes)	1983	1984	1985	1986	1987	1988	1989	1990
EC	27 361	27 927	28 058	28 048	28 001	28 440	28 753	28 979
Belgium	842	827	852	849	898	900	900	900
Denmark	716	692	668	670	662	655	650	650
FR of Germany	5 729	5 908	6 100	6 072	6 302	6 678	6 930	7 050
Greece	344	359	262	252	260	260	280	280
Spain	3 000	3 000	3 047	3 007	2 989	2 978	2 966	2 966
France	3 615	3 964	3 795	3 998	3 774	3 850	3 950	4 050
Ireland	781	740	748	740	703	665	652	652
Italy	3 137	3 192	3 273	3 238	3 256	3 260	3 250	3 250
Luxembourg	61	64	66	68	67	68	68	69
Netherlands	1 305	1 279	1 242	1 201	1 186	1 180	1 170	1 160
Portugal	645	637	718	768	762	826	839	853
United Kingdom	7 186	7 265	7 288	7 186	7 142	7 120	7 099	7 099

Source: Eurostat (Zpa1).

(6)

Table 8
Production of milk powders

(1 000 tonnes)	1983	1984	1985	1986	1987	1988	1989	1990
EC	3 200	2 957	2 781	2 968	2 554	2 295	2 303	2 327
Belgium	177	155	151	162	142	127	132	132
Denmark	134	115	120	125	115	104	104	103
FR of Germany	854	741	675	768	603	565	552	577
Spain	31	32	32	47	52	44	44	44
France	972	971	880	927	819	715	745	745
Ireland	180	213	188	182	160	128	123	123
Italy	3	2	3	3	3	3	3	3
Luxembourg	13	14	13	13	12	10	10	10
Netherlands	488	427	408	404	348	343	345	345
Portugal	12	11	11	14	14	14	14	15
United Kingdom	337	276	302	324	287	241	231	231

Source: Eurostat (Zpa1).

European 'real dairy' symbol (at the request of the EC dairy industry) shows that the industry is alert to the need to consider whether and how dairy product identity can be safeguarded and enhanced in a world of rapidly improving food processing techniques.

- Liquid milk

EC-wide consumption of liquid milk continues to fall slightly, although individual markets within the EC, such as France, where the liquid milk consumption level was traditionally low, and the Federal Republic of Germany are increasing steadily. Nevertheless, sales continue to reflect a shift to lower fat milks with semi-skimmed milks (1,5 to 1,8% fat) growing more rapidly than skimmed (0,3% fat). The EC school milk programme currently applies only to whole and semi-skimmed milks; uptake remains constant.

Packaging remains primarily in cartons and plastic bottles in most Member States, although the UK pint delivered on the doorstep is still in glass bottles. In certain regions of Germany a test launch of full cream (unstandardized) milk in glass bottles sold in shops over 1986-87 has proven popular on a modest scale.

- Preserved milk products

Production of skimmed-milk powder fell as a result of the tightening up of quotas in 1987 and the reduction in use of calf milk replacers. Production of whole-milk powder increased to meet export demand, although prices especially of small packs fell below those of bulk orders for the first time ever, owing to increased competition in this sector. Production of concentrated milk has continued to fall over a number of years, as customers, especially in third countries switched to powdered milk.

Table 9
Dairy cows' milk production

(1 000 tonnes)	1983	1984	1985	1986	1987	1988	1989	1990
EC	118 778	116 746	115 829	117 107	111 822	109 650	108 813	108 588
Belgium	3 872	3 819	3 796	3 918	3 777	3 675	3 675	3 675
Denmark	5 427	5 234	5 099	5 111	4 860	4 739	4 685	4 670
FR of Germany	26 913	26 151	25 674	26 350	24 420	23 976	23 900	23 900
Greece	678	670	663	648	645	648	650	650
Spain	6 210	6 392	6 258	6 108	5 941	5 801	5 775	5 775
France	27 650	27 700	27 790	28 074	27 146	26 700	26 700	26 700
Ireland	5 595	5 809	5 810	5 607	5 523	5 242	5 137	5 137
Italy	10 617	10 658	10 753	10 857	10 898	10 850	10 600	10 350
Luxembourg	290	299	301	299	293	283	283	283
Netherlands	13 240	12 782	12 550	12 695	11 672	11 397	11 335	11 335
Portugal	1 061	1 042	1 114	1 206	1 290	1 360	1 400	1 440
United Kingdom	17 226	16 191	16 022	16 235	15 358	14 979	14 673	14 673

Source: Eurostat (Zpa1).

Table 10
Employment

	1980	1981	1982	1983	1984	1985	1986	1987 (1)	1988 (1)	1989
EC (2)	293 176	282 843	281 366	284 404	281 519	272 692	264 523	261 647	260 352	259 803
Belgium, Luxembourg (2)	6 627	6 459	6 639	8 567	8 546	8 428	8 255	8 172	7 938	7 921
Denmark	9 430	8 011	7 961	8 179	8 296	7 097	7 501	8 565	8 401	8 383
FR of Germany	49 586	48 860	47 944	46 888	44 486	42 812	41 265	41 141	41 145	41 141
Greece (2)	3 696	3 794	4 236	4 528	4 732	5 251	5 294	5 212	5 212	5 201
Spain (3)	22 994	22 836	22 379	22 670	22 103	22 074	22 263	21 466	21 466	21 421
France	81 173	78 108	78 011	78 597	75 970	72 762	68 936	69 036	66 281	66 147
Ireland (3)	12 008	11 701	11 435	12 222	11 637	11 137	10 986	10 904	10 652	10 630
Italy	27 523	27 409	27 462	30 415	34 450	33 809	33 050	31 770	30 812	30 853
Netherlands (3)	22 768	22 460	22 113	21 360	20 875	20 040	19 804	19 277	23 653	23 604
Portugal (3)	8 727	9 162	9 596	9 345	9 757	9 546	9 020	8 733	8 991	8 972
United Kingdom	48 644	44 043	43 590	41 633	40 467	39 736	38 149	37 371	35 801	35 530

(1) Estimated.
(2) 1984-88 estimated.
(3) 1986-88 estimated

Source: Eurostat (Inde).

- Fresh products

This sector has consistently grown throughout most of the 1980s. In 1987 EC markets strengthened by 5% in volume for fermented milks and fresh cheese, by over 7% for cream and 10% for dairy desserts. Whilst low-fat fermented milk product sales continue well, the German market is seeing strong growth of its fat-enriched yoghurt sector. The development of specialist sectors, e.g. products for children, is boosting growth in the yoghurt sector as is the increasing popularity of multipacks.

Table 11
Production and external trade
Dairy products

(million ECU)	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Production in current prices										
EC (1)	35 718	39 034	43 200	47 149	49 432	50 461	54 751	56 275	59 592	63 555
Index (2)	70.8	77.3	85.6	92.8	97.7	100.0	101.1	103.9	110.0	117.4
USA (3)	22 473	30 458	36 661	41 851	46 839	49 271	39 326	34 983	34 637	N/A
Index	45.6	61.8	74.4	84.9	95.1	100.0	79.8	71.0	70.3	N/A
Japan (3)	5 437	7 233	7 707	9 118	10 795	11 698	N/A	N/A	N/A	N/A
Index	46.5	61.8	65.9	77.9	92.3	100.0	N/A	N/A	N/A	N/A
Production in constant prices										
EC (1)	48 105	47 934	48 129	50 413	51 254	50 461	54 206	55 838	57 277	58 450
Index (2)	95.9	95.3	95.9	100.2	101.6	100.0	100.1	103.1	105.8	107.9
EC trade in current prices										
Imports extra-EC (1)	484	623	680	686	643	682	731	709	N/A	N/A
Index (2)	72.1	91.3	99.6	100.5	94.2	100.0	98.9	95.9	N/A	N/A
Exports extra-EC (1)	3 003	3 773	3 904	3 480	3 910	3 827	2 998	3 080	N/A	N/A
Index (2)	78.5	98.6	102.0	90.9	102.2	100.0	78.0	80.1	N/A	N/A
X/M (1)	6.2	6.1	5.7	5.1	6.1	5.6	4.1	4.3	N/A	N/A
Imports intra-EC (1)	4 338	5 421	6 201	6 422	6 493	7 332	7 812	8 160	N/A	N/A
Index (2)	59.2	73.9	84.6	87.6	88.6	100.0	106.5	111.3	N/A	N/A

(1) 1980 EC 9; 1981-85 EC 10.
(2) Taking into account changes in EC membership.
(3) Census of manufactures and Eurostat estimates.

Source: Eurostat (Inde, Bise).

Employment trends

Employment in the dairy industries is decreasing in each of the Member States. There are many reasons for this. The main ones can be summarized as follows:

- fewer dairies and concentration on production of specific products coupled with the development of mechanization and automation of production lines
- limits on milk production because of the introduction of milk quotas since 1984.

Exports

The northern Member States are climatically better suited to dairying, indeed most of them — particularly the Netherlands, Belgium, France, Denmark and the Federal Republic of Germany — have a long tradition in dairy exports developed over many years.

In 1987, exports of butter and skimmed-milk powder (smp) increased significantly as the EC disposed of its intervention surpluses in sales to the USSR (butter) and food-aid schemes. By early 1988, this release of pressure began to find its way through to commercial markets and prices began to rise. Reports of smp prices exceeding even those of whole-milk powder are not uncommon, although this is also a result of relatively new activity on the part of New Zealand in the whole-milk powder retail market.

Cheese prices also firmed and volumes remained consistent with those of 1985 and 1986, although the trend for processed cheese has differed: exports fell sharply as dollar-reliant clients especially in the Middle and Far East were affected by the depreciation in the USD. The situation was then aggravated by the tightening up of EC milk quotas which reduced milk supplies and, owing to demand from competing dairy product sectors, placed milk protein for cheese at a premium.

Butter prices have not firmed up anywhere near as much as those of other products. The world market is oversupplied with butter and, as there is little prospect of demand increasing significantly in the near future, the remedy lies in the hands of world butter producers.

Outlook

The Council of Ministers' decision in December 1986 to reduce milk-production quotas by a further 9.5% in 1987-88 and 1988- 89 caused immediate shortages of milk protein in certain regions of some Member States in the trough production period. Whilst 5.5% of this was to be a temporary reduction, 3% was to be a definitive reduction; the further 1% to be achieved by the tightening up of the existing system (e.g. supplementary levy for both Formula A and Formula B set at 100%; more active encouragement of voluntary cessation of milk production) as laid down in COM(86) 648. In any case, quotas will apply until 1992 and very likely thereafter, albeit possibly in an amended, more flexible form.

Domestic consumption of cheese, fresh products and liquid milk will probably increase consistently to 1992. However, great uncertainty is cast on the level of the EC's future export performance, where, since dairy products are very closely linked to the CAP mechanism, much depends on the Community policy and not just on market competition. This makes forecasting of EC dairy exports and production by product almost impossible.

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DEEP-FROZEN PRODUCTS

(NACE 414.1 and 421.3)

Summary

The market for deep-frozen products is growing rapidly, helped by increasing storage possibilities in the home. The United Kingdom leads the field in this respect, with sales of frozen foods (including ice-cream) totalling more than ECU 5.1 billion, compared with ECU 2.8 billion in the Federal Republic of Germany and ECU 1.6 billion in France.

Current situation

Qualitative studies have demonstrated that housewives believe that the nutritional value of frozen foods is very close to that of fresh produce. The same studies show that frozen foods are popular because they can be prepared quickly, and the seasonal restrictions of fresh produce are avoided. Other factors, such as the absence of waste and the time saved by home storage, are favourable to a growth in demand for frozen products and indicate that the potential market is much larger than its current size.

Products

Fruit and vegetables are the leading frozen products, accounting for a quarter of total sales. These are followed by potato-based products, representing one-fifth of the total. Breaded products or products with cream are growing fast; prepared meals, desserts and bakery products are likely to have the highest rates of growth.

If quality is the major advantage of prepared dishes, novelty is almost as important. One of the basic reasons for which people buy prepared dishes is to vary their menus, have a break from the daily routine and experience new sensations. New products are thus a key element in increasing sales.

Frozen products are highly standardized in appearance (presentation, packaging, colour) and by the fact that they can be prepared quickly and easily. They thus correspond to the agro-industrial production models favoured by the multinational food giants, which hold the largest share of the market (Iglo-Ola for Unilever and Findus for Nestle).

Factors behind production trends

The production and distribution of frozen products requires very high investment in equipment. Only large firms are able to establish and maintain national distribution networks (hence the small number of producers). Small producers distribute their products by using the refrigeration capacities of large-scale ice-makers.

Table 1
Frozen food sales, 1986

(1 000 tonnes)	Denmark	FR of Germany	France	Italy	Netherlands	United Kingdom
Vegetables	31	216	231	157	47	335
Potato products	10	246	207	29	64	181
Fruit, fruit juices	1	16	7	1	1	2
Fish, seafood, molluscs	9	94	113	44	11	161
Meat	16	64	122	11	4	77
Venison	0	0	1	0	0	0
Bakery products	21	96	101	20	14	52
Milk products	1	2	2	7	1	35
Ready meals	N/A	100	72	14	72	N/A
Miscellaneous	N/A	N/A	N/A	5	N/A	N/A
Poultry	42	375	28	12	N/A	220
Total	131	1 209	884	300	214	1 063
Consumption (kg/capita)						
Including poultry	25.6	19.8	16.0	5.2	14.7	18.7
Excluding poultry	17.4	13.7	15.5	5.0	14.7	14.9

Source: Swiss Frozen Food Institute.

Large supermarkets are devoting more and more space to frozen products, emphasizing their practicality and quality.

Special departments (freezer banks) can now be found in all large supermarkets.

Outlook

After a period of stagnation in the late 1970s and 1980s, current prospects seem to be very promising. Consumption of these products is increasing at such a rate that in 1990 sales should be a third higher than in 1985. Europeans consume over 5 million tonnes of frozen products annually (excluding ice-cream), representing almost ECU 9 billion. Demand appears to be increasing rapidly in France and the Federal Republic of Germany, and at a more moderate pace in the UK. It is estimated that some 6.3 million tonnes will be marketed in 1990, compared with 5.2 million tonnes in 1986, accounting for a total value of ECU 10 to 11 billion for EC 8.

Written by DRI-Europe, based on information published in *Panorama of EC Industry 1989*

FRUIT AND VEGETABLE PROCESSING AND PRESERVING

(NACE 414)

Summary

The processing and food industry has experienced a steady growth in recent years. A production increase of around 5% a year is expected in the medium term. Climatic conditions explain why the canned fruit industry in particular is concentrated in the south of Europe. The EC industry as a whole employs some 128 000 persons. High land and labour costs as compared to countries like South Africa and Australia make competition very tough for European manufacturers. Therefore the EC has established an aid scheme for crops such as pears and peaches.

Description of the sector

NACE category 414 comprises quick freezing of fruit and vegetables, production of fruit and vegetables preserved in vinegar, brine or oil, whether or not canned, and the manufacturing of jams, marmalades and jellies.

The need to carry over seasonal fruit for year-round production leads to the primary fruit process being one of intermediate preservation, either by freezing, chemical preservation (sulphur dioxide) or canning.

Current situation

In 1988, consumption rose by 13%. Most of this consumption is, however, being supplied by non-European manufacturers, mainly because of the reasons mentioned in the summary. In 1988, European producers covered only 65% of European demand of fruit. This is especially reflected in the trade balance which shows a constant deficit, rising by 69% in 1988 compared to 1987. A decreasing trend in the produc-

Table 1
Main indicators, 1980-89 (1)
Processing and preserving of fruit and vegetables

(million ECU)	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Apparent consumption	8 216	9 312	10 353	10 709	12 526	12 892	13 080	13 589	15 375	N/A
Net exports (2)	-1 715	-1 467	-1 491	-1 596	-1 818	-1 929	-1 136	-1 285	-2 178	N/A
Production	6 501	7 845	8 862	9 113	10 708	10 963	11 944	12 304	13 197	14 071
Employment (number)	111 115	119 725	114 723	108 552	109 161	107 125	132 096	130 077	128 861	128 606

(1) 1980 EC 9; 1981-85 EC 10; 1986-89 EC 12 (estimated).
(2) 1988, excluding Greece.

Source: Eurostat (Inde, Bise, Comext).

Table 2
Production of canned vegetables

(thousand 850 ml tins)	1980	1981	1982	1983	1984	1985	1986	1987
EC (1)	1 983 127	2 219 545	2 521 980	2 402 374	2 421 991	2 692 877	2 651 682	2 347 164
Belgium	125 000	180 000	214 000	186 000	162 500	180 000	195 000	184 000
Denmark	22 500	22 500	22 400	28 134	27 191	26 248	25 445	N/A
FR of Germany	102 653	121 276	119 084	77 730	72 490	97 903	101 004	62 146
Spain	N/A	N/A	N/A	250 588	250 588	296 688	308 394	308 560
France	889 763	1 062 193	1 262 039	1 005 003	1 114 100	1 169 399	1 117 792	1 067 995
Ireland	31 997	32 997	24 371	22 051	N/A	N/A	N/A	N/A
Italy	168 800	167 500	168 300	165 100	163 800	176 000	172 200	174 900
Netherlands	225 000	279 491	325 000	282 000	305 000	396 695	385 941	320 183
United Kingdom	417 414	353 588	386 786	385 568	325 822	349 944	345 916	229 380

(1) Excluding Greece, Luxembourg and Portugal; 1980-82 excluding Spain; 1984-87 excluding Ireland; 1987 excluding Denmark.

Source: OEITFL.

tion of canned vegetables can be observed in recent years (an average of -6.4% per year between 1985 and 1987) whereas the production of canned fruit slightly increased in 1987, compared to 1986.

Consumption and production

The preserves market within Member States varies slightly according to national tastes, habits etc. For example the consumption of jams, marmalades etc., has been quite constant (perhaps a small decrease in the last years); however, a shift can be observed within the segment towards a higher quality product, a product with more fruit than the standard product for instance, although the standard product still accounts for a large majority. Another noticeable trend in recent years is seen in the uptake of reduced sugar jams, fuelled by the greater awareness of diet and nutrition, but so far the movement is in single percentage figures.

If we examine the figures by country, we note that the French consume a lot more canned vegetables than the Germans (in relative terms), but for all EC countries production is slowing down, and in general reached its peak in 1985.

Employment

As can be seen from Table 1, employment more or less stagnated in 1989. Employment peaked in 1986, when 132 096 persons were directly employed in the 12 Member States. In 1989 employment provided by the industry fell back by 3% compared to 1986. More than 100 factories are engaged in canning fruit throughout Europe, employing 12 000 people permanently and 25 000 seasonally. Almost 50% of the canneries in Italy and France belong to growers' cooperatives.

Outlook

Growth in consumption is likely to rise. However, European manufacturers of preserved fruit in the EEC have never been able to cover the full European requirement, due to higher production costs

Table 3
Production of canned fruit

(thousand 850 ml tins)	1980	1981	1982	1983	1984	1985	1986	1987
EC (1)	967 841	920 877	987 798	1 393 357	1 388 157	1 398 104	1 305 882	1 349 366
Belgium	31 390	37 720	38 426	40 969	41 663	41 885	45 784	47 863
Denmark	3 000	5 000	4 000	9 330	13 832	11 708	9 119	N/A
FR of Germany	142 654	122 730	146 111	148 721	133 744	134 040	130 585	146 828
Greece	224 620	210 000	215 960	212 563	218 448	197 983	182 150	143 377
Spain	N/A	N/A	N/A	341 176	341 177	342 235	330 521	323 252
France	181 827	167 312	217 413	239 250	239 507	240 506	234 598	246 829
Italy	222 500	224 000	212 000	230 000	244 000	260 000	240 000	289 235
Netherlands	126 000	120 400	108 300	122 000	107 000	123 715	92 235	103 300
United Kingdom	35 850	33 715	45 588	49 348	48 786	46 032	40 890	48 682

(1) Excluding Ireland, Luxembourg and Portugal; 1980-82 excluding Spain; 1987 excluding Denmark.

Source: OEITFL.

Table 4
Production of jam, marmalade, jellies and chestnut paste

(tonnes)	1980	1981	1982	1983	1984	1985	1986	1987
EC (1)	521 842	518 761	528 234	592 638	598 807	615 037	625 537	601 836
Belgium	16 380	19 935	20 864	19 596	24 107	18 950	18 326	20 935
Denmark	22 500	22 500	23 000	23 000	25 755	26 964	29 311	N/A
FR of Germany	106 180	104 577	105 168	120 000	125 000	130 000	135 000	140 000
Spain	N/A	N/A	N/A	60 000	60 000	60 234	58 560	54 320
France	124 006	127 940	132 877	129 800	135 402	137 085	144 218	150 964
Ireland	13 000	13 000	13 000	13 000	11 000	13 500	11 650	N/A
Italy	52 500	50 000	50 000	48 000	47 000	47 000	47 000	48 000
Netherlands	35 400	35 349	33 700	32 910	28 100	26 400	29 100	24 700
United Kingdom	151 876	145 460	149 625	146 332	142 443	154 904	152 372	162 917

(1) Excluding Greece, Luxembourg and Portugal; 1980-82 excluding Spain; 1987 excluding Denmark and Ireland.

Source: OEITFL.

than South Africa and sometimes Australia, while European producers have been able to replace the USA as the main source for their markets. (In 1988 for example, the EC agricultural prices were 0.337 ECU/kg for peaches and 0.438 ECU/kg for pears. In South Africa, the processing industry paid respectively 0.112 ECU/kg and 0.168 ECU/kg for those products).

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FLOUR

(NACE 416.12)

Description of the sector

The EC's flour milling industry annually produces over 24 million tonnes of wheat and rye flour. The number of operating mills within the Community fell from around 11 000 in 1970 to less than 3 606 in 1988. There are considerable variations in the structure and capacity of the industry within the different Member States. In the Federal Republic of Germany, France, Spain, and Italy, annual production averages less than 10 000 tonnes per mill. In contrast, the British, Irish and Danish industries are concentrated in much larger units. In the UK, for example, each of the country's 92 mills produces an average of more than 43 000 tonnes per annum.

Production

Production is primarily geared to domestic markets. Over 85% of flour is sold directly to small and industrial bakeries, biscuit, cake and rusk manufacturers. Other users include starch and glue manufacturers. On average, 75% of flour production is used for the making of bread, the consumption of which has increased slightly to an annual average of 65 kg per capita following a period of decline caused by greater affluence and a wider choice of foodstuffs. The image of bread as a healthy foodstuff and the larger variety of bread on offer are important factors contributing to this recent increase in consumption.

Consumption

Total EC flour consumption has risen by 10% over the past two decades, from 20 to 22 million tonnes. Automation and higher productivity have led to overcapacity in the milling sector. In 1987 overcapacity in the Community stood at about 9.5 million tonnes. There is clearly a need for further restructuring of the industry in certain countries.

Trade

The volume of intra-EC trade remains small but is growing at an average rate of 12% per year. It increased from 109 000 tonnes in 1976 to 379 000 tonnes in 1987. The institution of the internal market at the end of 1992 may further stimulate the intra-EC flour trade, particularly in view of reductions in transport costs. At present, the relatively high cost of transporting flour means that 80% of intra-Community trade involves Belgium, the Netherlands, Germany, and France, countries which have common borders. The largest single importer is the Netherlands, which in 1987 was the destination of 38% of total intra-EC trade (144 020 tonnes).

Exports to third countries play a vital role in stabilizing the internal market. In 1988 about 10% of the flour processed by the EC's millers was exported to third countries (about 2.6 million tonnes). France alone exported 1.4 million tonnes. Around 70% of the EC's flour exports went to Africa, where Egypt is the single largest market. The European Community, with a market share of 60% of the international flour trade (worth ECU one billion in sales) is by far the world's leading exporter. Since 1985, however, Community exporters have had to cope with competition from the US, whose exports are subsidized under the Export enhancement programme. A decrease in the EC's market share could have a destabilizing effect on the European milling industry.

Table 1
Main indicators, 1980-89 (1)
Grain milling

(million ECU)	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Apparent consumption	6 182	6 815	7 183	7 880	8 180	8 127	9 974	10 619	11 586	N/A
Net exports (2)	495	666	650	192	588	693	436	395	324	N/A
Production	6 677	7 481	7 833	8 072	8 768	8 820	10 410	11 014	11 910	12 688
Employment (number)	33 548	34 818	33 750	32 654	32 523	31 626	44 978	45 562	45 108	45 009

(1) 1980 EC 9; 1981-85 EC 10; 1986-89 EC 12 (estimated).
(2) 1988: Excluding Greece.

Source: Eurostat (Inde, Bise, Comext).

Table 2
Number of mills and total flour production, 1988

(1 000 tonnes)	Number of mills	Total flour prod.	Average prod. per mill
EC (1)	3 606	24 397	7
Belgium	65	917	14
Denmark (2)	14	347	25
FR of Germany	616	4 138	7
Greece (3)	180	1 400	8
Spain	513	2 099	4
France (2)	1 034	5 075	5
Ireland	8	179	22
Italy	977	4 550	5
Luxembourg	4	46	12
Netherlands	53	1 079	20
Portugal	50	574	12
United Kingdom	92	3 993	43

(1) Approximate figures because of absence of 1988 data for Denmark, Greece and France.
(2) 1987 figures.
(3) 1986 figures.

Source: National Milling Associations.

Table 3
Destination of flour consumed in home country, 1988

(%)	Bakeries	Biscuits rusks, confectn.	Household flour	Other uses
Belgium	90.5	7.8	1.6	.2
Denmark (1)	83.0	N/A	17.0	0.0
FR of Germany	73.0	14.0	9.0	4.0
Greece	N/A	N/A	N/A	N/A
Spain	77.9	16.6	2.2	3.2
France	72.7	14.4	5.9	7.0
Ireland	72.0	13.0	15.0	0.0
Italy (2)	83.0	N/A	N/A	17.0
Luxembourg (2)	90.0	N/A	N/A	10.0
Netherlands	71.5	13.5	.5	14.5
Portugal	89.0	10.0	1.0	0.0
United Kingdom	63.5	15.6	6.9	14.0

(1) Bakeries includes biscuit, rusks and confectioneries.
(2) Disaggregated figures available only for bakeries.

Source: National Milling Associations.

Technological development

Technological innovation in the flour milling industry has aimed at securing both a low-cost production process and improvements in flour quality. Despite its image as a traditional industry, the sector has progressively been modernized to meet the increasingly exact demands of its customers. Computerized operating systems and on-site quality-control laboratories with facilities for measuring protein content, humidity and bread-making elasticity have become commonplace.

Table 4
Exports of flour to third countries, 1988

(1 000 tonnes)	Exports
EC (1)	2 601.1
Belgium, Luxembourg	205.2
Denmark	2.3
FR of Germany	349.9
Spain	91.3
France	1 415.4
Italy	353.1
Netherlands	176.7
United Kingdom	7.2

(1) Greece, Ireland and Portugal negligible.

Source: Eurostat (Comext).

Table 5
Principal importers of wheat flour from the EC, 1981/82-1987/88 (July/June)

(1 000 tonnes)	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88 (1)
World total	7 545	6 829	7 775	6 237	5 745	6 749	6 215
Egypt	1 761	2 210	2 635	2 330	1 994	1 804	1 700
Libya	364	409	447	370	465	439	350
Cameroon	114	62	85	49	163	191	280
Yemen A.R.	143	187	258	257	222	250	270
Sudan	251	137	385	384	264	258	260
Syrian A.R.	177	210	68	115	65	388	230
Cuba	343	234	546	219	228	237	230
China	N/A	N/A	222	145	144	401	225
Vietnam	237	273	265	89	50	221	200
Iraq	191	327	348	252	213	179	100

(1) Provisional figures.

Source: International Wheat Council.

Table 6
Exports of wheat flour, 1981/82-1987/88 (July/June)

(1 000 tonnes)	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88 (1)
World total	7 545	6 829	7 775	6 237	5 745	6 749	6 215
EC (2)	4 381	3 069	3 932	3 853	3 523	3 442	3 400
plus processing (3)	680	620	258	179	84	74	50
USA	1 070	1 590	1 937	1 003	1 103	1 704	1 239
Canada	535	401	730	428	355	481	516
Japan	125	149	319	210	308	431	387
USSR	200	200	200	200	100	250	150
Australia	130	124	78	81	50	82	73
Others	423	676	321	283	222	285	400

(1) Provisional figures.
(2) 1981/82-1984/85 EC 10; 1985/86-1987/88 EC 12.
(3) Secondary trade (flour processed from imported wheat).

Source: International Wheat Council.

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INDUSTRIAL BAKING

(NACE 419.1)

Summary

The industrial manufacture of bread and baked goods has grown in importance due to the increasing urbanization of the population, new distribution systems and changes in shopping habits. The bread industry is an important supplier of bread and baked goods, bread representing between 18 and 70% of the industrial baking market, depending on the country.

Current situation

The European bread industry is expanding, and there is a continuing trend towards concentration. It has been able to bring changing market conditions, eating habits and consumer desires into line with one another through a wide range of high-quality products as well as new products. The fast-food sector represents good prospects for increased sales and growth for industrial bread producers. The same is true for the production and marketing of deep-frozen baked goods.

Industry structure

The bread industry is in competition not only with small-scale bakeries but also with manufacturers of substitute products. The increasing power of retailers on the demand side is a source of concern since they are increasingly tending to concentrate. Under these circumstances, the overall revenue level and the capitalization of firms should not be considered satisfactory.

The bread industry in all countries is characterized by regular increases in personnel costs. Cost-intensive manpower and technological progress are forcing firms in the industry to increase the degree of automation of their production, necessitating considerable investment.

Consumption

Bread consumption, which had been falling in all countries, has stabilized or even increased slightly since the early 1980s, following various kinds of Community publicity and public relations campaigns, including explanations of the nutritional value of bread aimed at consumers.

Ideas concerning nutrition have changed over the past 10 years, and changes in the economic environment have affected eating and shopping habits. Consumer information has become a high priority and their creativity and innovation have enabled industrial bread producers to take advantage of this development.

The bread industry, as a significant processor of agricultural produce, depends on the supply of high-quality raw materials. This is particularly true of cereals for bread but is also valid for other raw materials involved in processing.

Regulatory environment

The planned dismantling of structural surplus in accordance with EC agricultural policy reforms will be welcome, as will an agricultural price policy adapted to the realities of the market.

New technologies

New technologies have made their appearance in the bread industry. New processes such as analysis methods, extrusion and others have been integrated.

Table 1
Employment in EC bread factories, 1980-88

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Belgium	N/A	N/A	4 298	4 216	4 171	3 810	3 808	3 786	3 891
Denmark	N/A	N/A	N/A	N/A	N/A	N/A	11 000	11 000	12 000
FR of Germany	50 200	52 700	52 700	53 400	55 000	57 200	59 500	62 500	66 100
France	10 344	11 320	11 788	12 300	12 980	13 920	14 420	14 760	14 810
Ireland	N/A	N/A	N/A	N/A	N/A	N/A	9 600	N/A	9 300
Netherlands	39 700	N/A	N/A	N/A	38 800	N/A	38 400	38 200	38 000
United Kingdom	66 000	65 000	62 500	60 000	55 000	50 000	48 000	46 000	45 000

Source: AIBI.

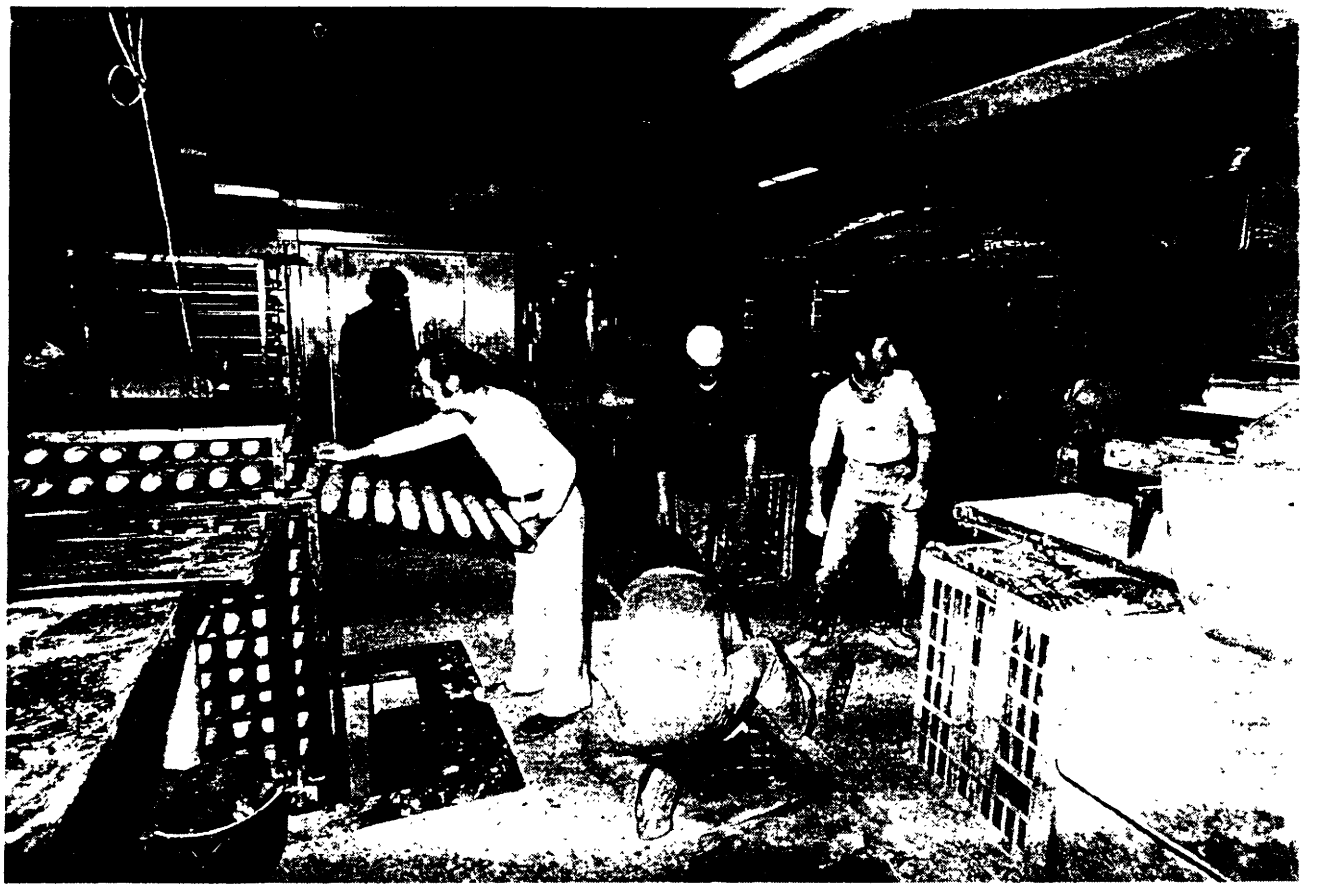

Table 2
Baking industry, 1980-88
Turnover

(million ECU)	1980	1981	1982	1983	1984	1985	1986	1987	1988
Belgium	N/A	169.5	156.6	154.1	154.0	155.9	159.8	N/A	N/A
Denmark	N/A	N/A	N/A	68.9	68.1	74.2	73.8	78.7	84.7
FR of Germany	1 673.8	1 767.4	1 909.1	2 044.9	2 206.8	2 369.4	2 538.7	3 018.1	3 218.7
France	675.1	741.3	763.3	767.9	823.8	899.1	969.8	1 099.3	1 170.3
Netherlands	927.0	998.0	1 120.0	1 186.0	1 248.0	1 278.0	1 370.0	1 435.0	1 435.0
United Kingdom	2 437.8	2 849.3	2 853.0	2 793.8	2 917.2	3 100.3	3 058.9	3 071.4	3 455.6

Source: AIBI.

Areas in which progress is expected in the future include fermentation technology, the development of freezing techniques, new preservation methods, computerization and data processing.

Outlook

Larger production units can be expected in the traditional bread industry. Demand for special breads and breads that can be kept persists. The trend towards fresh goods will be maintained. Half-processed and deep-frozen baked goods will increase in importance as a result of fermentation technology and freezing techniques. Future prospects for the bread industry are good in this respect.

Takeovers and shareholdings in bread industry firms from other countries will lead to increased interconnections at the international level. Collaboration with other firms, both domestic and foreign, creates new opportunities for joint ventures. The creation of the single European market in 1992 will have an effect throughout the food and drink sector, including the bread industry, which is looking forward to free trade in its products and the dismantling of existing trade barriers.

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RUSK MAKING AND BISCUITS

(NACE 419.4 — 419.5)

COCOA, CHOCOLATE AND SUGAR

(NACE 421.1 — 421.2)

Summary

In these two sectors, there are over 2 000 companies in 11 Member States of the EC (Luxembourg's production being negligible) which employ nearly 280 000 persons. Production has been rising through the 1980s in both sectors, but more steadily in the case of biscuits and rusks.

Description of the sector

Both rusk making (NACE 419.4) and biscuit making (including the making of gingerbread — NACE 419.5) are included in bread and flour confectionery, which fall under NACE 419.

Current situation

The total turnover of these two sectors was about ECU 24 billion in 1987, which represents an average of ECU 3 360 per tonne. For the biscuits sector, the average per tonne (2.83 ECU/t) is lower than for the cocoa/chocolate and sugar confectionery sector (3.83 ECU/t).

Even though we noted a slight decline in turnover in 1986, the 1987 figure represents a resumption of the rising trend for both subsectors, but it is still not as high as the 1985 figure for the cocoa/chocolate and sugar confectionery industries sector.

Both sectors consume a large amount of agricultural raw materials, such as sugar, butter, milk powder

Table 1
Main indicators, 1980-87
Biscuits/rusks

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987
Turnover (1 000 ECU) (1)	5 400	600	6 600	7 200	8 150	9 100	9 000	9 500
Production (2)	2 644	2 716	2 775	2 875	2 970	3 068	3 280	3 358
Intra-EC trade (2)	274	297	309	325	362	391	427	480
Imports extra-EC (2)	27	22	24	25	28	31	38	45
Exports extra-EC (2)	125	140	159	160	177	202	198	200

(1) EC 9.
(2) 1980 EC 9; 1981-85 EC 10; 1986-87 EC 12.

Source: Caobisco.

Table 2
Main indicators, 1980-87
Cocoa/chocolate/sugar confectionery

(tonnes)	1980	1981	1982	1983	1984	1985	1986	1987
Turnover (1 000 ECU) (1)	9 100	9 300	10 300	11 350	13 150	15 000	14 100	14 500
Production (2)	3 037	3 036	3 184	3 113	3 251	3 303	3 541	3 785
Intra-EC trade (2)	450	460	480	530	570	600	635	700
Imports extra-EC (2)	57	58	54	55	57	62	64	72
Exports extra-EC (2)	180	195	210	250	275	305	290	302

(1) EC 9.
(2) 1980 EC 9; 1981-85 EC 10.

Source: Caobisco.

and flour. Thus, in 1987, these two industries were responsible for a total sugar consumption of 2 050 000 tonnes and a total flour consumption of 1 900 000 tonnes.

These sectors are also the largest cocoa consumers in the world, cocoa imports reaching over 800 000 tonnes (expressed in beans equivalent) in 1987.

Since 1980, production figures have improved consistently in almost every country, and for biscuits as well as for cocoa/chocolate and sugar confectionery. To put the EC figures in perspective, we have included in Table 4 and 5 the production figures for Japan and USA. However, for the USA, figures are only available for the cocoa/chocolate and sugar confectionery sector.

Table 3
Biscuits/rusks and cocoa/chocolate/sugar confectionery
Number of companies and employees, 1987

	Companies	Employees
EC	2 090	278 700
Belgium	125	11 000
Denmark	60	6 500
FR Germany	265	5 800
Greece	15	2 500
Spain	430	12 500
France	460	33 000
Ireland	40	4 200
Italy	230	40 000
Netherlands	170	16 000
Portugal	70	5 000
United Kingdom	225	90 000

Source: Caobisco.

Table 4
Biscuit production by country

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987
EC (1)	2 685	2 716	2 775	2 910	3 005	3 248	3 280	3 358
Belgium	130	135	140	150	155	150	160	180
Denmark	75	80	90	100	110	115	115	105
FR of Germany	320	330	340	365	395	405	415	435
Greece	41	41	41	41	41	41	41	41
Spain	N/A	N/A	N/A	N/A	N/A	150	160	160
France	585	585	580	600	605	605	610	635
Ireland	24	25	24	24	24	22	24	22
Italy	460	485	525	560	595	615	600	605
Netherlands	280	285	285	285	290	320	320	335
Portugal	N/A	N/A	N/A	35	35	30	30	35
United Kingdom	770	750	750	750	755	795	805	805
Japan	266	266	267	267	257	247	237	227

(1) 1980-82 EC 10; 1983-84 excluding Spain.

Source: Caobisco (for EC countries) and *Statistical Bulletin of IOCCC* (for Japan).

Table 5
Cocoa/chocolate/sugar confectionery
Production

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987
EC (1)	3 059	3 037	3 184	3 118	3 255	3 499	3 541	3 785
Belgium	160	167	178	190	196	212	219	219
Denmark	53	52	54	58	61	62	59	60
FR of Germany	895	939	1 035	936	987	986	988	1 034
Greece	21	26	26	21	22	26	28	28
Spain	N/A	N/A	N/A	N/A	N/A	190	196	195
France	454	458	467	441	447	446	473	536
Ireland (2)	49	41	43	47	48	48	43	107
Italy	227	222	224	217	229	226	238	261
Netherlands	376	362	364	403	427	446	452	475
Portugal (3)	N/A	N/A	N/A	5	4	6	5	5
United Kingdom	824	770	794	801	834	853	841	868
USA	1 582	1 647	1 723	1 844	1 935	1 963	1 947	2 080
Japan	279	295	297	295	285	288	293	300

(1) 1980-82 EC 10; 1983-84 excluding Spain.
(2) 1980-86 excluding semi-finished cocoa products.
(3) Sugar confectionery production figures are not available.

Source: Caobisco (for EC countries) and *Statistical Bulletin of IOCCC* (for Japan).

- In the EC, the main biscuit producers are the United Kingdom, followed by France and Italy. The Japanese share of the market has been declining since 1983.
- For cocoa/chocolate and sugar confectionery, Germany is by far the largest producer, with 27% of total EC production. Between 1980 and 1987, the United States announced the highest production growth rate (31%), while the EC and Japan registered 23% and 7% respectively.

The rising trend in production that can be seen in Table 5 was made possible by the continued increase in total demand over the past few years. Per capita consumption of biscuits and rusks in particular is still rising, in contrast to, per capita consumption of cocoa/chocolate and sugar confectionery, which fell in 1986 and 1987.

It should be noted that Mediterranean countries consume fewer sweetened products than the northern countries.

Trade

In 1987, intra-EC trade reached a total of 1 180 000 tonnes, which represents 16.5% of total production. Exports to third countries amounted to 500 000 tonnes, or 7% of total production. The breakdown by sector was as follows in 1987:

- For the biscuits sector, intra-Community trade represented 480 000 tonnes, which accounted for 14% of biscuit production. The EC's external balance (in volume) was still running a large surplus (155 000 tonnes in 1987) since extra-EC imports and exports grew at about the same rate (respect-

Table 6
Biscuits/rusks
Per capita consumption trends

(kg)	1980	1981	1982	1983	1984	1985	1986	1987
EC (1)	9.12	9.14	8.81	10.00	8.60	8.70	8.70	9.50
Belgium, Luxembourg	9.80	10.20	10.50	10.50	10.30	10.10	11.30	12.90
Denmark	8.70	8.40	9.00	9.60	9.70	8.80	8.70	9.20
FR of Germany	5.80	5.70	5.70	6.10	6.40	6.30	6.30	6.20
Greece	N/A	N/A	4.50	N/A	4.50	4.50	4.00	4.00
Spain	N/A	N/A	N/A	N/A	N/A	N/A	4.10	3.90
France	9.80	9.80	10.00	11.30	11.80	12.00	12.50	13.10
Ireland	11.60	11.00	10.60	10.40	10.40	10.40	10.40	11.10
Italy	8.10	8.50	9.30	9.70	10.30	10.70	10.10	10.30
Netherlands	15.30	15.60	15.40	15.50	15.40	16.70	16.50	17.50
Portugal	N/A	N/A	N/A	3.50	3.30	2.90	2.70	3.20
United Kingdom	13.00	13.00	13.10	13.30	13.00	13.00	13.30	13.10

(1) 1980-81 excluding Greece, Spain and Portugal; 1982 excluding Spain and Portugal; 1983 excluding Greece and Spain; 1984-85 excluding Spain.

Source: Caobisco.

Table 7
Cocoa/chocolate/sugar confectionery
Per capita consumption trends, 1980-87

(kg)	1980	1981	1982	1983	1984	1985	1986	1987
EC (1)	4.25	4.30	4.40	4.40	4.55	4.75	4.40	4.40
Belgium, Luxembourg	4.90	4.85	5.20	5.45	5.55	5.70	5.85	5.50
Denmark	4.70	5.00	4.90	5.20	5.30	5.60	5.50	5.40
FR of Germany	6.15	6.15	5.90	5.90	6.30	6.05	6.05	6.50
Greece	.85	.90	.90	.90	.95	.95	1.10	1.10
Spain	N/A	N/A	N/A	N/A	N/A	N/A	2.30	2.10
France	3.40	3.35	3.50	3.40	3.40	3.30	3.35	3.40
Ireland	5.65	5.75	6.05	5.65	6.00	6.45	6.10	5.70
Italy	1.55	1.55	1.50	1.60	1.60	1.70	1.80	1.75
Netherlands	5.10	5.15	5.10	5.25	5.40	6.20	5.60	5.85
United Kingdom	5.75	5.90	6.20	6.20	6.40	6.60	6.45	6.50

(1) Excluding Portugal; 1980-1985 excluding Spain.

Source: Caobisco.

ively 60 and 67% between 1980 and 1987). Exports to third countries amounted to about 200 000 tonnes, or 6% of total production.

- For the cocoa/chocolate sector, intra-EC trade represented 700 000 tonnes, which was 19% of total production. The surplus of the external balance has considerably increased over the 1980s: exports grew by about 67%, while imports grew by only 26%. Exports to third countries amounted to 300 000 tonnes, or 8% of total production.

These exports were mainly destined for European Free Trade Association (EFTA) countries (142 000 tonnes), the USA (124 000 tonnes), the Gulf countries (44 000 tonnes), Canada (42 000 tonnes) and Japan (26 000 tonnes).

Imports of biscuits and rusk products from third countries amounted to approximately 120 000 tonnes.

Trade barriers with non-EC countries are the same as those in place in the cocoa, chocolate and sugar confectionery sector, i.e. high customs duties, blanket import restrictions or obstacles due to very restrictive legislation concerning food products.

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ICE-CREAM INDUSTRY

(NACE 421.3)

Current situation

Ice-cream is produced in every country of the EC. In 1987 total production amounted to 1 516 million litres. The external balance of the EC became slightly positive in 1987 as extra-EC exports grew considerably but international trade in ice-cream with respect to the EC remains limited since extra-EC imports and exports only represent about 9% of EC production and consumption. The industry employs around 25 000 persons in the EC. It should be noted that the only available figures for this sector are expressed in litres and not in value.

Table 1
Main indicators, 1986-87 (1)
Ice-cream

(1 000 litres)	1986	1987
Apparent consumption	1 510 465	1 505 020
Net exports (2)	-11 790	11 670
Production	1 498 675	1 516 690

(1) Excluding Portugal.
(2) Nimexe figures translated into litres: 1 kg = 2 litres.
Source: Euroglaces.

Production

Total production of ice-cream has been marked by an increasing trend since the early 1980s. Over the past three years, however, production volume has remained rather stable in the EC countries. The Federal Republic of Germany was the main producer in 1988, with the United Kingdom, France and Italy following close behind in order. Altogether, these four countries represented about 70% of total production in 1988.

In several countries of the EC (France, Germany, Luxembourg, the United Kingdom), ice-cream is still considered as a pure 'dairy product'. This implies that national legislation rules out the use of vegetable fat. Another obstacle to a further development of ice-cream production is the importance of artisanal industry which represents a significant part of the market in some Member States (Germany, Italy and Spain), while these hardly exist in Denmark or Ireland, where industrial ice-cream production is included as part of the dairy industry.

It should be added that in spite of considerable efforts made by producers, ice-cream sales still depend on weather conditions. For this reason, seasonality must be taken seriously into account.

Consumption

A slight decrease in total consumption can be noted in 1987 but the situation is quite different from one country to another. It fell sharply in Belgium and Luxembourg (to about half of the 1986 level) but the drop was softer in Denmark, Germany and Ireland. The other EC countries, mostly in southern Europe saw a rise in their consumption.

Table 2
Production of ice-cream

(1 000 litres)	1983	1984	1985	1986	1987	1988 (2)
EC (1)	1 227 740	1 381 780	1 396 751	1 498 675	1 516 690	1 594 830
Belgium, Luxembourg	81 600	78 300	80 260	110 000	110 000	115 000
Denmark	39 240	39 800	40 810	52 000	49 400	53 350
FR of Germany	325 000	295 000	306 000	330 480	325 310	362 140
Greece	41 370	41 370	44 060	44 060	44 360	44 360
Spain	N/A	97 930	103 980	116 350	130 710	150 320
France	197 410	192 100	192 850	209 160	212 210	228 150
Ireland	26 100	25 580	23 280	23 280	24 400	24 660
Italy	225 000	213 750	225 510	223 255	227 720	227 720
Netherlands	43 700	39 960	40 000	48 920	48 000	48 000
United Kingdom	249 320	257 900	340 000	341 170	344 580	341 130

(1) 1983 EC 10; 1984-88 excluding Portugal.
(2) Estimated.
Source: Euroglaces.

Table 3
Ice-cream consumption in 1986 and 1987

(1 000 litres)	Imports extra-EC (2)		Exports extra-EC (2)		Total consumption		Consumption (3)	
	1986	1987	1986	1987	1986	1987	1986	1987
EC (1)	113 410	137 400	101 620	149 070	1 510 465	1 505 020	4.8	4.8
Belgium, Luxembourg	5 000	6 400	55 000	81 200	60 000	35 200	6.0	3.6
Denmark	600	1 100	10 000	18 600	42 600	31 900	8.3	6.3
FR of Germany	20 500	20 000	7 130	11 400	343 850	333 910	5.6	5.5
Greece	1 360	6 400	2 450		42 970	50 760	4.3	5.1
Spain	300	3 200	2 940	8 400	113 710	125 510	2.9	3.2
France	28 500	34 400	5 100	6 600	232 560	240 010	4.2	4.3
Ireland	3 300	3 300	5 240	6 400	21 340	21 300	6.0	6.1
Italy	5 950	5 700	4 660	6 670	224 545	226 750	3.9	4.0
Netherlands	34 400	38 000	5 950	4 500	77 370	81 500	5.3	5.7
Portugal	1 600	6 100	N/A	N/A	N/A	N/A	N/A	N/A
United Kingdom	13 500	18 900	3 150	5 300	351 520	358 180	6.2	6.3

(1) Excluding Portugal.
(2) Nimexe figures translated into litres: 1 kg = 2 litres.
(3) Litres per capita.

Source: Euroglaces.

Per capita, consumption varied little between 1986 and 1987. In general, it is higher in the northern countries of the EC, probably because competition from fresh fruits or cheese is less intensive there.

An important factor for the ice-cream industry is the fact that nearly every household is now equipped with a refrigerator and a freezer. This allowed the industry to progress from 'impulse products', consumed when and where they are bought, to familial products, stored and consumed at home. This led to a certain diminution of the seasonality of sales and a growth in sales volume through the 1980s.

Trade

Compared to total production in the EC trade figures are relatively low. Once again, however, the situation varies from country to country. The main importers are the Netherlands, France and The Federal Republic of Germany and the volume of imported ice-cream grew in 1987, except in the case of Germany. It is in the Netherlands that the portion of consumption accounted for by imports is the highest (46% in 1987). On the export side, all the countries except the Netherlands have improved their position, the volume of ice-cream exports having grown in 1987: Belgium and Luxembourg (47%), Denmark (86%), Germany (59%), Spain (185%), etc. Belgium and Luxembourg are by far the main exporters, with about 70% of their production going for exports.

Table 4
Ice-cream industry

(A) number of employees: 25 000

(B) the top 10 enterprises in alphabetical order:

France Glaces Findus	F — PARIS
Frisko Sol	DK — SKOVLUNDE
Helados Y Congelados	E — VITORIA
Italgel	IT — PARMA
Langnese Iglo	D — HAMBURG
Lyons Maid Ltd	UK — GREENFORD
Ortiz — Miko	F — ST DIZIER
Sagit SpA	IT — ROME
Schiller GmbH	D — NÜRNBERG
Wall's Ice Cream	UK — WALTON

Outlook

Given that ice-cream sales depend for the most part on weather conditions and seasonal factors, it is very difficult to make forecasts for this sector. There is no reason to believe that consumption will radically change in the coming years and the seasonality factor will probably remain. On the other hand, international trade in ice-cream is still developing and one can assume that this upward trend will continue in the immediate future.

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SUGAR

(NACE 420)

Current situation

Sugar plays an important role in the common agricultural policy, employing 65 000 people directly and with almost 400 000 growers delivering beet to 172 factories during the 1988/89 season throughout the Community.

The EC sugar sector has had a market organization since 1968. The EC, the world's largest producer and second largest consumer of sugar, exports large quantities of this product outside the EC. This activity is carried on under a strict policy of self-finance and budgetary neutrality.

Production

All the EC countries, with the exception of Luxembourg, produce sugar beet, as is shown in the table below. The total area over which beet is cultivated increased in the 1970s, reaching a peak of 2.2 million ha in 1981-82, but has since decreased to a stable level of approximately 1.8 million ha, or 3% of the total amount of usable arable land in the Community.

The sugar contained in the 90 to 95 million tonnes of sugar beet produced is extracted, stored and packaged in a small number of high-capacity factories (38 in the Federal Republic of Germany, 14 in Belgium, 6 in Denmark, 52 in France, 33 in Italy, 8 in the Netherlands, 13 in the United Kingdom, etc.), that operate 24 hours a day during the harvest season. As the manufacturing period varies from approximately 60 days in Italy to 120 days in the UK, the Community sugar industry is able to receive and process more than 1.3 million tonnes of beet per day.

Table 1
Main indicators, 1981/82 — 1987/88 (1) (2)
Sugar manufacturing and refining

(1 000 tonnes)	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88
Apparent consumption	10 995	10 855	10 686	10 890	10 790	11 069	10 896
Net exports (3)	3 811	3 874	2 673	2 464	2 888	3 009	2 653
Production	16 060	15 101	12 253	13 586	13 645	14 122	13 209
Employment (1 000)	77.3	76.3	72.9	73.5	71.2	68.8	65.8

(1) Year runs: 1 October to 30 September; units are 1 000 tonnes of white sugar.
(2) 1981/82 to 1985/86 EC 10.
(3) Quota + C sugar without transformed products.

Source: CEFS.

Table 2
Areas under beet

(1 000 hectares)	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88
EC (1)	1 993	2 242	2 098	1 905	1 936	1 886	1 899	1 840
Belgium	126	135	130	120	123	125	118	111
Denmark	75	76	76	72	74	73	69	67
FR of Germany	414	464	429	403	423	415	399	384
Greece	28	42	41	38	28	43	44	28
Spain	183	220	260	249	209	178	195	182
France	521	610	533	462	501	464	421	420
Ireland	33	35	34	36	36	35	38	37
Italy	282	320	257	222	217	225	277	283
Netherlands	121	133	137	117	129	131	137	128
United Kingdom	210	207	201	186	196	197	201	200

(1) Excluding Luxembourg and Portugal.

Source: CEFS.

Table 3
White sugar production

(1 000 tonnes)	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88
EC	13 166	16 060	15 101	12 253	13 586	13 645	14 122	13 209
Share of world production (%)	15	16	15	13	14	14	14	13
Belgium	799	1 030	1 105	782	839	943	938	804
Denmark	427	480	537	346	547	530	499	388
FR of Germany	2 749	3 392	3 303	2 507	2 894	3 155	3 192	2 731
FR of Germany, from molasses	N/A	2	9	19	19	19	19	19
Greece	174	323	296	298	218	317	287	182
Spain	904	1 026	1 144	1 240	1 074	903	1 020	1 005
France-Metropolitan	4 205	5 130	4 446	3 562	3 957	3 953	3 410	3 649
France-DOM (1)	N/A	317	309	263	300	296	305	303
DOM cane sugar (1)	0	0	16	8	9	15	14	14
Ireland	148	168	222	197	222	174	186	223
Italy	1 779	2 048	1 180	1 244	1 275	1 244	1 719	1 718
Netherlands	875	1 044	1 130	743	934	915	1 239	979
Portugal	0	9	9	9	5	4	5	2
United Kingdom	1 106	1 092	1 419	1 062	1 323	1 211	1 323	1 226

(1) DOM: Départements d'outre mer (French overseas departments) are Guyana, Guadeloupe, Martinique, Réunion.

Source: CEFS.

Table 4
Number of sugar and refinery companies

	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89
EC	115	110	106	99	98	96	93	88
Belgium	10	10	10	10	10	10	10	9
Denmark	2	2	2	2	2	2	2	2
FR of Germany	30	29	29	23	23	22	21	17
Greece	1	1	1	1	1	1	1	1
Spain	15	13	11	10	7	7	7	7
France	34	34	34	34	34	33	31	31
Ireland	1	1	1	1	1	1	1	1
Italy	18	16	14	14	16	16	16	16
Netherlands	2	2	2	2	2	2	2	2
United Kingdom	2	2	2	2	2	2	2	2

Source: CEFS.

Table 5
Per capita consumption trends

(kg)	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88
EC	N/A	34.5	33.9	33.3	33.9	33.5	34.3	34.0
Belgium	36.3	37.5	38.5	39.9	39.3	39.8	38.3	38.9
Denmark	40.0	41.2	39.7	39.1	38.9	39.9	37.9	38.6
FR of Germany	35.9	36.9	35.6	34.7	36.1	35.2	35.3	35.4
Greece	34.3	29.1	29.4	30.5	31.3	31.8	30.6	32.0
Spain	30.2	27.5	27.4	26.4	24.1	26.0	26.1	26.0
France	36.0	36.6	35.5	34.9	34.6	34.2	37.4	35.8
Ireland	40.9	40.7	40.1	39.8	38.8	38.7	38.4	38.4
Italy	29.0	27.6	26.8	25.7	28.9	26.8	26.7	26.3
Netherlands	39.5	39.5	38.3	38.3	38.5	39.2	39.4	38.5
Portugal	N/A	27.6	29.5	30.5	34.1	29.9	30.6	30.3
United Kingdom	38.9	40.5	41.0	40.4	40.2	40.4	42.2	42.1

Source: CEFS.

Table 6
Total sugar consumption (1)

(1 000 tonnes)	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88
EC	N/A	10 995	10 855	10 686	10 890	10 790	11 069	10 896
Share of world production (%)	N/A	12	12	11	11	11	11	N/A
Belgium	358	370	379	393	387	392	378	384
Denmark	205	211	203	200	199	204	194	198
FR of Germany	2 212	2 276	2 193	2 127	2 203	2 148	2 155	2 168
Greece	332	284	289	301	310	316	305	320
Spain	1 135	1 041	1 043	1 009	925	1 002	1 013	1 052
France	1 947	1 990	1 938	1 915	1 907	1 892	2 074	1 996
Ireland	140	141	140	140	137	137	136	138
Italy	1 640	1 561	1 519	1 465	1 649	1 534	1 528	1 510
Netherlands	561	564	549	551	556	569	576	567
Portugal	N/A	273	294	306	345	304	313	311
United Kingdom	2 194	2 283	2 308	2 278	2 271	2 293	2 398	2 252

(1) White sugar equivalent.

Source: CEFS.

Table 7
Consumption, 1987/88 (1)

(tonnes)	EC	B	DK	D	GR (2)	E	F	IRL	I	NL	P (2)	UK
Human consumption												
Direct												
(1 000 tonnes)	3 667.0	120.6	54.4	521.7	127.9	485.0	623.5	57.5	790.0	104.0	124.4	658.0
(kg/capita)	11.3	11.8	10.6	8.5	12.8	12.5	10.9	16.3	13.8	7.1	12.3	11.6
Industrial												
(1 000 tonnes)	7 066.0	257.3	139.9	1 613.2	191.9	567.0	1 314.0	77.8	711.3	438.0	186.6	1 569.0
(kg/capita)	21.8	25.1	27.3	26.4	19.2	14.6	23.1	22.0	12.4	29.7	18.5	27.6
Total												
(1 000 tonnes)	10 733.0	377.9	194.3	134.9	319.8	1 052.0	1 937.5	135.3	1 501.3	542.0	311.0	2 227.0
(kg/capita)	33.1	36.9	37.9	34.9	32.0	27.1	34.0	38.3	26.2	36.7	30.8	39.2
Chemical industry												
(1 000 tonnes)	154.7	4.6	2.9	33.4	0.0	0.0	58.0	3.0	8.7	24.0	0.0	20.0
Feedstuffs												
(1 000 tonnes)	8.5	1.7	.8	0.0	0.0	0.0	0.0	1.0	0.0	5.0	N/A	5.0
Total industrial uses												
(1 000 tonnes)	7 229.2	263.7	143.6	1 646.6	191.9	567.0	1 372.0	80.8	720.0	463.0	186.6	1 594.0
(kg/capita)	22.3	25.8	28.0	26.9	19.2	14.6	24.3	22.9	12.5	31.4	18.5	28.1
Total consumption												
(1 000 tonnes)	10 896	384	198	2 168	320	1 052	1 996	138	1 510	567	311	2 252
(kg/capita)	33.5	37.5	38.6	35.5	32.0	27.2	35.0	39.2	26.3	38.4	30.8	39.6

(1) White sugar equivalent.
(2) 40% human direct consumption/60% industrial consumption.

Source: CEFS.

Since sugar beet is an agricultural raw material, production depends on climatic conditions as well as on the area under cultivation, although the effect of such conditions has been greatly diminished by progress in seed quality. Yields (in tonnes of sugar per hectare) however, can vary by as much as 30% in the same country from one year to another. After reaching a peak of 16 million tonnes in 1981-82, EC sugar production has stabilized between 13 and 14 million tonnes in the past five years. These volumes make the EC the world's largest producer, well ahead of the USSR (9 million tonnes), Brazil (7.8 million tonnes) and Cuba (6.9 million tonnes).

Consumption

Sugar consumption has stabilized in the 1980s because market demand became saturated, and new sweeteners have been marketed (i.e. isoglucose, synthetic products). Per capita consumption varies according to national eating habits (from 27 kg/y in Spain to 40 kg/y in Denmark and the United Kingdom). In general, there has been a significant shift year after year from domestic use (table sugars) to industrial use (processed sweetened products, organic chemicals), the latter now representing over 60% of total sugar consumption in the EC.

Trade

According to the terms of Protocol III of the Lomé Convention, the EC is committed to import 1.3 million tonnes of sugar annually from African, Caribbean and Pacific countries for an indeterminate period, the prices paid to the producers being based on current intervention Community price. Since the EC is more than self-sufficient in sugar, these tonnages increase the quantities available for exports. In a period of depressed world prices, the results are:

- a significant increase in the export receipts of the countries concerned;
- a specific cost to the EC assimilated by the Community budget.

The EC sugar exports totalled:

- 1982/83: 5 207 million t
- 1983/84: 4 062 million t
- 1984/85: 3 832 million t
- 1985/86: 4 204 million t
- 1986/87: 4 506 million t
- 1987/88: 4 193 million t.

The breakdown of exports by geographical zone for 1987 was 37% for Africa, 40% for the Near and Middle East, 9% for Asia and 11% for non-EC European countries.

Organization of sugar in the EC

The organization of the sugar market in the Community is based essentially on a quota system together with a mechanism for financing exports. Each EC country has an A quota and a B quota called the specialization segment.

The EC total A quota amounts to 10 540 000 million t and the B quota to 2 288 588 million t (A + B = 12 828 588).

Both the A and B quotas benefit from subsidies, in contrast with C sugar produced over and above these tonnages, for which there are no price or disposal guarantees and which must necessarily be exported to third countries.

Table 8
Production and external trade (1)

(1 000 tonnes)	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88
Production	15 025	13 948	11 010	12 507	12 738	14 122	13 209
Index	120.1	111.5	88.0	100.0	101.8	112.9	105.6
Imports extra-EC	1 372	1 333	1 389	1 368	1 316	1 497	1 540
Index	100.3	97.4	101.5	100.0	96.2	109.4	112.6
Exports extra-EC (2)	5 183	5 207	4 062	3 832	4 204	4 506	4 193
Index	135.3	135.9	106.0	100.0	109.7	117.6	109.4
X/M	3.8	3.9	2.9	2.8	3.2	3.0	2.7

(1) 1981/82 — 1985/86 EC 10.
(2) Quota + C sugar without transformed products.
Source: Eurostat (Zpa1), CEFS.

Table 9
Production quotas by country

(tonnes white sugar)	Quota A	Quota B	Quota B/ Quota A (%)
EC	10 540 000	2 288 588	21.7
Belgium	680 000	146 000	21.5
Denmark	328 000	96 629	29.5
FR of Germany	1 990 000	612 313	30.8
Greece	290 000	29 000	10.0
Spain	960 000	40 000	10.0
France	2 560 000	759 233	30.0
DOM (1)	436 000	43 600	10.0
Ireland	182 000	18 200	10.0
Italy	1 320 000	248 250	18.8
Netherlands	690 000	182 000	26.4
Portugal	55 000	5 455	10.0
Port./Azores	9 000	909	10.0
United Kingdom	1 040 000	104 000	10.0

(1) DOM: Départements d'outre mer (French overseas departments): Guyana, Guadeloupe, Martinique, Réunion.

Source: CEFS.

Export financing

The sugar sector is regulated by a self-financing system in which producers are responsible for all the costs involved in the export of Community sugar. Nevertheless, re-exporting costs of the equivalent imported tonnage from ACP countries are handled by the EAGFF.

The cost is financed through production contributions from growers (60%) and manufacturers (40%):

(a) a levy of 2% of the subsidy price for quota A sugar;
(b) a levy of 39.5% of the subsidy price for quota B sugar;
(c) when the product of these two levies is insufficient, a special levy must be collected so that the export account can be balanced.

Thus, at the end of a complex process, the costs relating to A sugar and B sugar are entirely financed by the sugar sector.

Because manufacturers are compelled to export non-quota sugar at their own expense, and because C sugar falls into this category, there is no levy on its production.

By way of example, in 1987-88, of the total exports (4 193 000 tonnes) quota sugar accounted for 3 375 000 tonnes and non-quota sugar for 818 000 tonnes.

Industry structure

The European sugar industry, being a heavy-investment sector, is concentrated in a very small number of companies (88 for the whole Community compared with 203 in 1960). Sugar manufacturing is complemented by considerable refining activity, particularly in the United Kingdom, France, and Portugal.

CEFS: Comité européen des Fabricants de Sucre
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COMPOUND FEED INDUSTRY

(NACE 422)

The EC compound feed industry consists of two distinct industries, the farm animal feed and the pet food industry, which differ in size and development. We begin by analysing the compound feed industry in its entirety below, and in the following section, look more closely at the pet food industry. Unfortunately, no information was available about the farm animal feed industry.

Summary

1988 has been a good year for compound feed producers. Including Greece for the first time, production totalled almost 100 million tonnes. This represents an increase of about 0.5 % over the previous peak (of 98 879 000 tonnes in 1983).

Current situation

For the first time in many years, progress was recorded in all Member States in 1988 and in all three major production lines: cattle, pig and poultry. There was just one exception, with milk replacers for calves where, following a drop of about 3% in 1987, production fell again by about 4% in 1988.

The following facts played an important role: milk production was intensified; more rational feeding offset the effect of quota; grain and roughage crops were poor; pig prices were favourable; and the overall economic situation in Portugal improved.

Generally speaking, 1988 was a good year for the compound feed industry, but the favourable production figures should not mask the problems: feed mills work at between 30 to 75% of their production capacities; competition is extremely strong and profit margins tight. Production units have been closed down, while mergers and takeovers continue. The market share between cooperatives and private industry which is currently in a ratio of about 35:65 tends to change in favour of the cooperatives. Integration between industrial feed and livestock production, though difficult to quantify, is in progress.

Consumption

The present situation of consumer demand for livestock products may be characterized as follows:

- consumer demand has reached a saturation point for many commodities;
- competition from new products is increasing;
- every now and then there are incidents causing negative publicity effects on the image of animal production industry (illegal use of additives, health problems);
- human population growth in Europe is nearly stagnant.

These factors have resulted in a stabilizing demand for compound feed in Europe. In addition, a number of countries outside the EC which used to be important target markets for livestock products, became self-sufficient or even started exporting. The products that were destined for these markets had to be sold on the EC market. This excess production problem was exacerbated by the fact that the rapid growth of the livestock markets had stimulated an even larger increase in production capacity of the compound feed industry.New feed mills were built and the capacity and efficiency of the existing ones was increased.

Table 1
Main Indicators, 1980-89 (1)
Animal and poultry feeds

(million ECU)	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Apparent consumption	15 535	16 821	18 275	20 209	21 319	20 593	23 498	24 391	25 606	N/A
Net exports	190	471	410	335	536	404	322	229	163	N/A
Production	15 725	17 292	18 685	20 544	21 855	20 997	23 820	24 620	25 769	25 514
Employment (1 000)	85.8	83.3	80.8	79.3	77.8	74.1	86.9	85.6	85.9	85.7

(1) 1980 EC 9; 1981-85 EC 10.

Source: Eurostat (Inde, Bise, Comext).

Currently, there is obviously an over-capacity in compound feed production. Feed companies have tried to react to this situation by undertaking several adjustments: cutting profit margins, developing new feed markets (fish feed), increasing product differentiation, utilizing new raw materials, adopting new technologies, implementing cost reduction, developing niche market products and participating in new market concepts of animal feed products.

Compound feed demand

Cattle feed

Following a decline in 1987, production went up again by 3.5% in 1988, despite falling dairy cow numbers. France, Italy and the Federal Republic of Germany made substantial progress of 8, 6.9 and 5.4% respectively. Advances were more moderate in Belgium (4.2%), the United Kingdom (0.7%) and the Netherlands (0.1%). Denmark and Ireland were on the losing side. Portugal reached an astonishing score of nearly 18% which is largely due to bad weather conditions and a poor roughage harvest.

Milk replacers for calves

The veal industry continued to be struck by the milk quota. Production costs increased by two main factors: milk replacers became more expensive after the rundown of the intervention stock of skimmed-milk powder. The reduction in dairy herds meant fewer and consequently dearer calves. Especially in the Federal Republic of Germany, the hormone crisis brought a sharp decline in demand for veal.

Pig feed

Pig farmers enjoyed profitable incomes thanks to a favourable cost/selling price ratio. France, Ireland and Denmark made the best scores: 9, 5.9 and 5.4% respectively. At the other end, Portugal had to cope with swine fever and a consequent loss of pig herds, which reduced demand by more than 5%. In between, Belgium, the Netherlands and Spain progressed by 4.5, 1.1 and 3.8% respectively. The UK and Germany recorded only small increases of 1.6 and 0.8%.

Table 2
Compound feed (1)

(1 000 tonnes)	1984	1985	1986	1987	1988
Cattle feed	29 549	29 056	30 066	31 083	32 214
Index (2)	101.7	100.0	103.5	96.4	99.9
Pig feed	26 671	26 481	27 360	33 356	34 561
Index (2)	100.7	100.0	103.3	106.5	110.3
Poultry feed	21 084	21 147	21 550	26 706	27 255
Index (2)	99.7	100.0	101.9	104.0	106.1
Other	3 707	3 290	3 633	5 229	5 310
Index (2)	112.7	100.0	110.4	124.3	126.2
Total	81 011	79 974	82 609	93 374	99 340
Index (2)	101.3	100.0	103.3	102.9	106.1

(1) 1984-85 EC 10; Greek industrial compound production included at an estimated 1 million tonnes per year; excluding Luxembourg.
(2) Taking into account changes in EC membership.
Source: Fefac.

Poultry

The Portuguese and the Irish industry had a good year with 10 and 7.5%, followed by the UK with 4.6% and France with 3.5%. Italy and Spain also booked minor increases but in all other Member States stagnation and decline are showing.

Raw material consumption

The overall pattern has not changed very much from 1987. The use of grain as animal feed remains in the

Table 3
Compound feed output per livestock class, 1988

(1 000 tonnes)	B	DK	D	E	F	IRL	I (1)	NL (2)	P	UK	EC (3)
Cattle feed	1 352	1 797	7 074	2 309	3 949	1 194	4 200	5 300	927	4 112	32 214
Pig feed	2 688	2 425	5 959	4 169	5 187	446	2 600	7 800	1 102	2 185	34 561
Poultry feed	933	502	3 267	3 802	6 135	373	4 200	3 300	1 052	3 691	27 255
Other	90	139	510	1 020	1 275	148	850	400	136	742	5 310
Total	5 063	4 863	16 810	11 300	16 546	2 161	11 850	16 800	3 217	10 730	99 340

(1) Estimated.
(2) Marketing year 1987/88.
(3) Excluding Greece and Luxembourg.
Source: Fefac.

Table 4
Cereal proportion in compounds

(%)	1983	1984	1985	1986	1987	1988
EC	39.6	39.0	38.3	35.4	32.7	31.0
Belgium	29.3	22.0	20.0	19.6	18.0	18.0
Denmark	37.8	40.5	39.5	33.3	29.2	28.0
FR of Germany	21.6	23.8	24.0	23.6	20.1	18.3
Greece	50.0	50.0	50.0	50.0	50.0	47.1
Spain	65.3	65.0	67.5	68.4	64.9	63.1
France	47.7	48.1	45.6	39.6	33.8	31.0
Ireland	67.2	42.1	46.8	33.3	38.1	33.3
Italy	53.6	51.4	52.8	51.9	48.2	47.1
Netherlands	15.3	15.6	16.1	13.9	12.1	11.9
Portugal	55.1	65.4	52.0	37.9	30.0	25.8
United Kingdom	43.8	45.3	42.3	38.4	40.6	38.3

Source: Fefac.

limelight. Since 1983 the cereal proportion in compounds has continued to decline.

Grain use is decreasing and use of grain replacers is increasing, resulting in a grain percentage use of 39 in 1984 and 31 in 1988. Grain replacers are heavily used in Benelux and the Federal Republic of Germany, but inclusion in compound feed in the southern European countries is decreasing as well.

Table 5
Raw material consumption

(1 000 tonnes)	1984	1985	1986	1987	1988 (1)
Manioc	5 257	6 336	5 822	6 986	6 900
Sweet potatoes	101	351	602	607	600
Grain offals	1 197	973	683	230	100
Corn gluten feed	3 734	3 542	4 097	4 707	4 500
Maize feed meal	1 036	958	1 440	2 393	2 800
Brewery distillers	416	436	633	853	700
Citrus pulp	1 322	1 467	1 237	1 652	1 500
Beet pulp	417	488	321	483	700
Other	133	114	207	347	500
Total	13 613	14 665	15 042	18 258	18 300

(1) Estimated.

Source: Fefac.

Regulatory environment

Maximum Alfatoxin levels in babassu, cotton, colza, palm kernel, groundnut and maize, as well as their derivatives have been fixed at 0.2 ppm for raw materials.

The great battle for keeping coccidiostats under the additives regulation has started. More and more feed legislation tends to be based on socio-economic parameters in addition to the traditional criteria of quality, safety and efficiency. Minimum standards for keeping pigs and calves in intensive production systems are being tabled for adoption by the Council of Ministers.

At Community level, measures are being prescribed for the limitation of water pollution by nitrates. Member States are making efforts to reduce phosphorous contamination by feeding lower P levels.

The compound feed industry is playing a positive role to reduce the negative environmental effects:

- improved feed conversion ratio by better nutrition will result in a lower quantity of manure;
- reduced mineral contents in the feed;
- detailed adjustment of feed programmes to the requirements of the different growth or production phases;
- improvement of the availability of minerals in raw materials, for instance phytase project;
- recycling projects.

Technological development

The future of the compound feed industry will be influenced by new technological developments in its own field and in other sciences:

- biotechnology, resulting in new additives, BST, PST, Beta-agonists, etc., resulting changes in population structures, feed standards and requirements;
- enzymes and probiotics, creating changes in feed values, feeding systems and changes in the importance of certain raw materials;
- genetic engineering, with consequences for requirements, performances, disease resistance, new products, but also for consumer acceptance;
- information technology.

The compound feed industry will continue to face intense competition not only among existing feed companies but also with new potential entrants and substitute products.

Feed companies serving a number of sectors may be low cost driven, or may try to differentiate by combining feed sales with extensive service packages, or find other ways to distinguish from the overall market.

Other companies operate on a narrower base (for instance specialized in one segment of the market), aiming for economies of scale or trying to differentiate (top quality young animal feed service companies, etc.).

Market segmentation or differentiation can be done in different directions: livestock sector (e.g. poultry, pigs, dairy), type of farming (e.g. free-range products), type of product aiming at special markets, consultancy services separated from feed.

If companies have to adjust to new competitive environments, different strategic options are open: forward integration, adding new services to the product, developing niches for speciality feeds, acquisition of competitors in order to diminish capacity.

Outlook

For 1989 indicators and estimates point to a decline of about one million tonnes of compounds in the EC 9 and an increase of about one million tonnes in Portugal, Spain and Greece. Compound production in Greece is indeed expected to expand thanks to the EAGGF programme. Total EC production would thus still stay around its peak of 100 million tonnes.

Some experts believe, however, that this forecast may be too optimistic. It appears indeed, that in some major producing countries such as Germany, the Netherlands and the UK, production has already been falling sharply in the first half of 1989.

The internal market for compound feed is saturated and offers little prospects for large progress. Being a product with low added value, long distance export is not easy. Export refunds granted under the CAP system are insufficient to build up real and regular markets in third countries.

Consumption per head of beef and veal will decrease over the next decade. Poultry meat consumption is expected to increase considerably to a level close to that of beef consumption, while pork consumption will increase further following a brief stagnation this year.

Egg consumption will continue to decrease as in recent years, unless product development and strong marketing efforts succeed in creating new opportunities and opening large consumer segments. Feed compounders and producers have to work hand in hand with marketing organizations to reach this goal.

The compound feed industry has to cope with overcapacity in certain regions, and consequently with pressure on margins and struggle for tonnage. There will be a tendency to stronger market orientation. On one side, 'free' feed sales to farmers will be the objective, but involvement of the feed industry in integrated projects to produce specified animal products will also continue to develop.

Downstream activities will receive more emphasis and will have more influence on product specification, production circumstances and also on margins. Concepts of quality control through the total production chain will grow, resulting in co-makership between subsequent stages of the production chain. This tendency will also lead to specialization and vertical integration.

Flexibility, control and optimal adjustments of the subsequent partners is a must to compete adequately with fully integrated organizations.

A continuing consolidation and concentration process of companies seeking a stronger market position and increased market share is expected. The long-term value of takeovers and mergers, however, will be determined by how well company structures and market approaches match. In spite of the larger organizations, the feed companies tend to maintain their regional or national character to address the specific nature of the many regional and national markets.

Retail organizations and processors of animal products are rapidly reaching a European scale. To follow this trend and to prepare for 1992, feed or animal production companies are trying to acquire, merge or cooperate to reach a global scale.

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PET FOOD

(NACE 422.2)

Summary

Industrial production of pet food began in Europe in the late 1950s. In a quarter of a century, the prepared pet food industry has made its mark as a new and important sector of the food processing industry; its unique characteristics and rapid growth have made it one of the most dynamic processors of agricultural materials. Situated between the food industry on the one hand and the feedingstuff industry on the other, the prepared pet food industry has proved to be an additional and valuable outlet for agricultural produce. Its prime merit lies in its potential for giving added value to materials and surpluses not taken up by food and the foodstuff industries. The prepared pet food industry provides direct employment for some 18 000 people. A strong growth rate of around 7% per year, which is very high for the food industry, is expected over the medium term.

Description of the sector

The EC pet food industry covers three major product categories :

- dog food
- cat food
- food for other pets, such as birds, fish, etc.

Current situation

One of the dominant characteristics of this industry is investment in technology and high-performance equipment, which enables it to develop quality foods from materials (meat, poultry and fish by-products, cereals and vegetables) not used for human consumption or in excess of requirements. In giving added value to these agricultural by-products and materials, which were previously often wasted, the activity of the Community pet food industry has a positive impact on the income and profit margins of farmers and fishermen. It also lowers the cost of other parts of the carcass, which reduces meat prices to the consumer, and as a result of it, substances such as blood, which in the past were inevitable sources of pollution, are reprocessed. Prepared pet food significantly reduces the quantities of fresh meat taken from the human food chain to be fed to pets.

Consumption

From a very modest level in 1950, the increase in sales of prepared pet food has been rapid, as may be seen from the turnover figures over the past decade.

The number of companies involved in the manufacture and marketing of prepared pet food has risen in line with the growth in the market. In 1987 there were 248 production units, of varying sizes, located in all regions of the Community. None of the Fediaf member companies which represent 94% of EC production utilize meat or by-products from whales, kangaroos or other endangered species in the manufacture of pet food.

Today over half of the 44 million pet-owning households, corresponding to 170 million animals in the European Community, use prepared pet food on a regular basis and this trend is increasing.

Products are prepared scientifically according to nutritional requirements recommended by the National Research Council (NRC) of the National Academy of Sciences of the USA. The industry manufactures (under biochemical, bacteriological and organoleptic control) a very wide range of products and recipes that provide variety and are nutritionally sound and convenient. Pet foods for cats and dogs may be categorized according to the manufacturing process or method of use:

Table 1
Pet food sales

(million ECU)	1974	1978	1981	1983	1986	1987
Sales	653	1 298	2 179	2 552	3 188	3 437

Source: Fediaf.

- products sterilized in metal containers;
- intermediate moisture products with moisture levels ranging from 15 to 50%;
- dry products with a maximum moisture level of 14%.

In each of these categories:

- complete products offering the animal in good health all the nutritive elements it needs;
- complementary products which need to be fed together with other foods to ensure a balanced diet.

Table 2
Consumption of raw materials, 1986

(1 000 tonnes)

Meat by-products	1 193
Fish by-products	114
Cereals and vegetables	965

Source: Fediaf.

Other pet foods include food for birds, aquarium fish and small animals (hamsters, etc.). This exists in a range of forms, such as biscuits, flakes or pellets. In each case, the products can be complete or complementary.

Trade

Due to the absence, up to 1987, of specific subheadings for pet food in the Nimexe, there are no figures available on imports of raw materials and exports or imports of prepared pet food. However, the majority of the materials used by the pet food industry originate from the European Community. Imports consist mainly of primary offal (liver, lungs) of which the quantities available in the EC are insufficient. These imports subsequently enable the industry to use greater quantities of secondary EC by-products.

Trade between Member States in pet food is highly developed. However, the Community market is self-sufficient, and the import of finished products is minimal.

On the other hand, efforts to expand into foreign markets are beginning to bear fruit. According to data collected amongst Fediaf members, the exports of prepared pet food are estimated at 190 000 tonnes. This is already quite an achievement and an obvious indication of the international competitiveness of the industry given the impact of transport costs of these weighty products in relation to low unit prices. Foreign markets are promising and should lead to an increased surplus.

Outlook

The rapid growth rate of the European pet food industry demonstrates that it meets a real need by providing pet-owners with the assurance that prepared pet food is of consistently high quality allowing nutritionally balanced feeding.

Table 3
Breakdown of sales, 1987

(1 000 tonnes)

Dog food	
Tinned	1 099
Other	607
Cat food	
Tinned	948
Other	209
Foods for birds, fish and other pets	55
Total	2 918

Source: Fediaf.

However, there is still potential for further development. Increasing numbers of pet-owners realize that prepared pet food is the best way to keep their pets healthy.

According to estimates, over the next five years, the growth trend in prepared pet food sales will be close to 50% in the European Community. This may be explained in part by a rise in the pet population, but to a greater extent by the fact that pet-owners increasingly understand the importance of a nutritionally balanced diet as a means of keeping their pets in good health.

Hence, strong motivation exists for the industry to further intensify its efforts in research and development, to maintain its rate of investment and to increase its positive contribution to the Community economy as a whole and to agriculture in particular.

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MISCELLANEOUS PRODUCTS

(Included in NACE 423)

SOLUBLE COFFEE

(Included in NACE 423.10.1)

Summary

The soluble coffee industry is based on heavy capital investment and high technology.

Compared to the world's total coffee consumption, soluble coffee consumption represents about one-third of the world green coffee consumption. The EC, the USA, Japan and Australia are at present the biggest instant coffee consumers. EC production of instant coffee grew slowly through the 1980s to reach 87 631 tonnes in 1987. Imports represent 17.6% of consumption while only 8.7% production is exported.

Consumption

Soluble coffee consumption inside the EC stabilized at around 97 006 tonnes in 1987 after peaking at about 100 137 tonnes in 1984. The UK represents about half of EC soluble coffee consumption , followed by France and the Federal Republic of Germany (16 300 tonnes and 12 000 tonnes). Consumption per capita is the highest in the UK at 0.86 kg and to a lesser extent in Ireland (0.50kg/head). In the EC as whole, the consumption per capita averaged 0.30kg in 1987 and has remained stable over the past few years.

Trade

There is a 9% tariff quota on imports (instead of the usual 18%) within the generalized system of preferences (GSP), as a result of which 19 200 tonnes are imported at half the duty rate.

The fact that coffee is subject to the International Commodity Agreement (ICA) may have some repercussions on the supply of green coffee for processing. As one manufactures to national and even local tastes (by blending coffees of different origins), availability is sometimes hampered by the ICA quota system.

Coffee is a commodity that represents a very important revenue for the countries of origin and there have been times when coffee ranked immediately after oil in the importing countries' trade balance.

Soluble coffee is one of the few processed products for which the principle of purity is fully implemented; the EC Directive on coffee and chicory extracts (77/436) stipulates that soluble coffee is to be obtained by extraction from roasted coffee beans, the only acceptable medium of extraction being water.

There are no soluble coffee factories in Denmark, Greece and Ireland. There is considerable trade between Member States and about 20 000 tonnes of soluble coffee are imported and around 8 000 tonnes are exported every year.

Regulatory environment

The International Coffee Agreement (ICA) is of particular relevance to the activities of the European coffee industry and to European trade. The

Table 1
Main indicators, 1983-87
Instant coffee

(tonnes)	1983	1984	1985	1986	1987
Apparent consumption	96 801	100 137	97 039	96 079	97 006
Imports	25 163	23 859	23 634	17 605	17 051
Exports	6 175	6 258	8 295	8 360	7 676
Production	77 813	82 538	81 700	86 834	87 631

Source: Eurostat and Afcasole.

Table 2
Instant coffee consumption

	Total consumption (tonnes)					Per capita consumption (kilograms)				
	1983	1984	1985	1986	1987	1983	1984	1985	1986	1987
EC	96 801	100 137	97 039	96 079	97 006	.30	.31	.30	.30	.30
Belgium, Luxembourg	1 271	1 251	1 257	1 318	1 296	.13	.12	.12	.13	.13
Denmark	440	570	300	408	360	.09	.11	.06	.08	.07
FR of Germany	14 000	13 000	12 500	12 000	11 900	.23	.21	.20	.20	.20
Greece	3 500	4 500	3 357	3 470	3 180	.35	.46	.34	.35	.32
Spain	8 500	8 500	8 500	8 700	8 900	.22	.22	.22	.22	.23
France	14 300	16 100	16 400	16 200	16 300	.26	.29	.29	.29	.29
Ireland	1 540	1 970	2 287	2 350	1 760	.44	.55	.65	.66	.50
Italy	1 900	1 700	1 300	1 490	1 490	- .03	.03	.02	.03	.03
Netherlands	1 400	1 400	1 440	1 590	1 530	.10	.10	.10	.11	.10
Portugal	800	800	800	800	1 390	.08	.08	.08	.08	.13
United Kingdom	49 230	50 340	49 000	48 000	48 900	.87	.89	.86	.84	.86

Source: Afcasole.

implementing body of the ICA, the International Coffee Organization (ICO), is an intergovernmental organization. Its members are 50 coffee exporting countries, representing some 99% of world coffee production, and 24 importing countries (amongst others, all EC Member States), accounting for about 87% of world consumption. In a nutshell, its main objective is to bring about a balanced supply-demand situation with stable prices. It achieves this mainly through a system of exports quotas: the total annual volume of coffee allowed for export to members is limited to a quantity that is expected to result in the maintenance of a weighted average of prices within a predetermined range (in recent years USD 1.20 to 1.40/pound). The total volume is distributed to individual producing countries. There is a complex system to ensure that the volume exported by each individual producing country remains within its allotted export quota.

Table 3
Imports of green coffee into the EC

(tonnes)	1985	1986	1987	1988
EC	1 551 710	1 537 300	1 645 341	1 629 794
Belgium, Luxembourg	101 247	81 624	88 668	82 220
Denmark	46 296	46 455	50 844	50 019
FR of Germany	423 427	452 888	487 026	492 399
Greece	20 292	12 500	21 361	22 200
Spain	133 390	149 092	147 198	141 468
France	275 750	281 515	297 020	303 001
Ireland	530	654	756	858
Italy	281 087	251 547	263 318	259 401
Netherlands	144 750	141 203	155 465	150 731
Portugal	22 051	20 831	27 420	25 100
United Kingdom	102 884	98 991	106 265	102 327

Source: EUCA.

Since exports to non-members (primarily countries in Eastern Europe and the Middle East) are not limited in volume, countries that produce more coffee than the quality covered by their export quotas compete for a share in non-member markets. This has resulted in prices that were half of those prevailing in the member market causing problems of a political as well as economic nature.

The rigidity of the quota allocation system has been a particular source of concern for the European coffee industry. Changes in the consumption pattern could not be accommodated by an increase of the quota for those countries whose coffees were in demand. This has recently contributed to excessive price differences between the two main types of coffees, i.e. Arabicas and Robustas.

The ICO has been in existence since 1962. The underlying treaties have regularly been renegotiated. The ICA went into force in 1983 and expires on 30 September this year. Since 3 July 1989 however, the quota system has been suspended and after 5 days of negotiations between producers and consumers members of the ICO, no agreement could be reached. This has led to a sharp decrease of coffee prices, which fell to their lowest level for 14 years (Robustas as well as Arabicas). The market is thus now governed by supply and demand, and prices are the same for all countries. The ICO will continue to exist, providing statistical information and serving as a forum in which discussions on a new and fully functional ICA can be resumed.

The suspension of the quota system offers new opportunities to producing countries such as Brazil, Indonesia or Central American countries to recapture market shares, especially as crops are expected

to be exceptionally favourable in 1990 and 1991. However, the very likely drop of prices, which already started will have an important impact on export earnings in countries which do not have sufficient reserves to follow an aggressive commercial policy or mainly produce less demanded sorts of coffee such as Robustas (Madagascar or African countries, as for example, the Ivory Coast).

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TEA

(NACE 423.10.5)

Tea consumption in the UK, by far the largest consumer in the Community, has gradually been decreasing over the last 25 years. In 1977, it amounted to 200 000 tonnes and in 1987, it had fallen to about 160 000 tonnes.

Table 4 shows the imports of tea in the different EC countries. In 1988, EC imports totalled 215 800 tonnes. The United Kingdom is the first importer with 162 699 tonnes or 75.4% of the total, the Federal Republic of Germany (14 800 tonnes or 6.8%), Ireland (10 376 tonnes or 4.8%), France (10 155 tonnes or 4.7%) and the Netherlands (9 500 tonnes or 4.4%) are following but with much smaller amounts.

In almost all EC countries, imports had slightly fallen in 1987 but the increasing trend has resumed as in the beginning of the 1980s.

Table 4
Imports of tea into the EC

(tonnes)	1985	1986	1987	1988
EC	208 837	225 802	195 142	215 800
Belgium, Luxembourg	1 295	1 498	1 214	1 300
Denmark	2 317	2 432	2 155	2 200
FR of Germany	15 500	15 500	14 700	14 800
Greece	300	300	300	300
Spain	734	719	730	740
France	9 154	10 036	9 148	10 155
Ireland	10 656	11 295	10 885	10 376
Italy	3 876	3 295	3 489	3 500
Netherlands	9 361	9 429	9 725	9 500
Portugal	285	232	217	230
United Kingdom	155 359	171 066	142 579	162 699

Source: CEdT.

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VINEGAR

(NACE 423.3)

Summary

The vinegar industry is an innovative sector. A large part of the annual income in turnover is generated by new products. Production in the EC reached 398 million litres in 1987. This is a 1.8% decrease compared with 1986. Consumption fell by about the same percentage but is still higher than production. As a result, net exports still remain more positive with about 14.7 million litres.

It should be noted that all the figures given below are calculated for vinegar with 10% acidity. Moreover, Greece, Luxembourg, the Netherlands and Portugal are not included.

Production and consumption

In 1987, there were 152 vinegar companies in the EC. These are mostly concentrated in Southern Europe, especially in Italy (44), Spain (32) but also in the Federal Republic of Germany (30) and France (24). Their total turnover reached ECU 197 million in 1987. The average production per company was 2.6 million litres in 1987. This is a slight decrease

compared to 1986. The distribution of production among the EC countries has the following in 1987: the Federal Republic of Germany 29.9%, France 22.2%, UK 16.6%, Italy 13.4%, Spain 10.5%, Belgium 4.1%, Denmark 3%, Ireland 0.3%.

Table 5
Main indicators, 1986-87 (1)
Vinegar

(hundred litres)	1986	1987
Apparent consumption	3 922 538	3 837 844
Net exports	134 499	146 920
Production	4 057 037	3 984 764
Per capita consumption (2)	1.4	1.3
Number of enterprises	150	152
Average production (3)	27 047	26 215

(1) Excluding Greece, Luxembourg, the Netherlands and Portugal.
(2) Litres
(3) Average production of fermented vinegar by company.
Source: CPIV.

As mentioned before, fermented vinegar amounted to 3 984 764 hectoliters in 1987. Fifty-five percent of it was distilled vinegar which is mainly produced in the Federal Republic of Germany and France. Wine vinegar accounted for 34.5% of total production and Italy, Spain and France are the largest producers for this type of vinegar. The remaining 10.5% are other vinegar for which the UK is the main supplier in the EC.

Per capita consumption of vinegar in the Community amounted to 1.5 litres, which is a slight increase in comparison with the previous year's level, e.g. 1.3 litres. The highest level was registered in Denmark (2.4 litres) and the lowest in Ireland and Italy (respectively 0.4 and 0.9 litres). In Italy, however, large quantities of vinegar are still being produced from wine in households and, consequently, the average consumption is actually much higher.

The raw material for vinegar production is alcohol, which is extracted by fermenting agricultural products such as wine, sugar beet, potatoes or fruit. As a result, the vinegar industry is a major purchaser for wine. In 1988, some 1.5 million hectolitres of wine, 250 000 hectolitres alcohol and 400 000 hectolitres of malt, fruit wine and other raw materials were produced in the Community. Distilled alcohol usage is diminishing, while wine and other raw materials such as cider are increasingly used.

Trade

EC imports amounted to 176 479 hectolitres in 1987, which is about the same level as in 1986. For Ireland and Belgium, imports represent about 50% of production while only 1 to 6% in the other EC countries. EC exports reached 323 349 hectolitres in 1987. This means a 3.8% increase in comparison with 1986. In Germany, exports accounted for 15.1% of production. Here again, in the other EC countries, the situation is different: the share of exports in total production only represents between 3 and 7% of production.

The annual increase in turnover is to a large extent generated by new products, which are mostly convenience oriented. To develop new products and improve the various types of vinegar, companies have their own research and development departments.

For the eight EC countries considered, total turnover reached about ECU 200 million in 1987.

Table 6
Production of vinegar

(1 000 hl)	1980	1981	1982	1983	1984	1985	1986	1987
EC (1)	3 540	3 589	3 804	3 601	3 978	4 099	4 057	3 985
Belgium	102	125	167	190	137	154	171	164
Denmark	133	136	152	128	134	145	142	119
FR of Germany	993	1 081	1 150	1 128	1 086	1 177	1 230	1 192
Spain	N/A	N/A	N/A	N/A	363	381	398	417
France	987	1 021	1 077	925	993	987	930	885
Ireland	13	13	12	12	12	10	9	10
Italy	522	522	550	550	541	526	540	535
Netherlands	130	107	90	91	84	84	N/A	N/A
United Kingdom	661	584	606	579	628	636	638	663

(1) Excluding Greece, Luxembourg and Portugal; 1980-83 excluding Spain; 1986-87 excluding the Netherlands.
Source: CPIV.

Regulatory environment

The producers of fermentation vinegar are organized in national professional associations. In 1949, these national associations came together in the permanent committee of vinegar producers.

At present, a great deal of the ongoing discussion is focused on the single market of 1992. The Permanent International Vinegar Committee asked the Commission for a clear distinction between fermentation vinegar from agricultural produce on the one hand, and chemically produced substitutes on the other.

In addition, a Code of Practice for vinegar is under preparation, based on the FAO/WHO standard for vinegar of 1986; the goal being to establish what is meant by good quality produce and thus assure the free movement of goods without competitive distortions.

CPIV: Permanent International Vinegar Committee
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ALCOHOL AND SPIRITS

(NACE 424)

Summary

This sector includes two major categories of products: spirits and ethyl alcohol of agricultural origin. The latter is used in many different ways, such as in food processing (spirits, vinegar, etc.), and solvents and chemical reagents, and has potential applications in the automobile sector. The EC is the world's leading exporter of spirits: EC whiskies and brandies (cognac, armagnac, etc) dominate export markets, followed by gins, vodkas and liqueurs. But within the EC, consumption has not increased for years.

Table 1
Estimated manpower (1)

(1 000)	Employees	Enterprises (2)
1980	85	532
1981	81	511
1982	77	498
1983	75	469
1984	68	449
1985	65	437
1986	65	409
1987	64	N/A
1988 (3)	66	N/A

(1) For enterprises employing 20 employees or more.
(2) Excluding Denmark, Ireland and Luxembourg.
(3) Estimated.

Source: Eurostat (Inde), UEAES.

National tastes still prevail, with, for instance, Korn in Germany, pastis in France, ouzo in Greece, jenever in the Netherlands and Belgium, akvavit in Denmark. But major categories of drinks are consumed everywhere such as whisky (or whiskey in Ireland), brandy (or Weinbrand in Germany), gin, vodka, rum and liqueurs.

Direct manpower in the alcohol and spirit sectors for enterprises employing 20 persons in the EC can be assessed as shown in Table 1.

Production

If there was a slight increase in production in 1987 over 1986, this was mainly due to developing export markets.The EC alcohol and spirits sector consumes an estimated 2 to 2.4 million tonnes of solid raw materials (cereals, potatoes, fruit) and in addition, an estimated 24 to 25 million hl of wine (including quantities bought up by intervening authorities), beet molasses and cane juice or syrup.

Table 3 shows that in 1987 the EC produced more than 12 million hl of pure alcohol of agricultural origin compared with 8.6 million hl for the EC 10 in 1980. On the other hand, three Member States (Germany, the UK and France) produced ethyl alcohol from ethylene at a rate of 5 million hl per year.

Alcohol from molasses is produced in all EC countries except Luxembourg and represents a little under a third of overall agricultural alcohol production.

Grape alcohol ranks first in alcohol production at 4 to 5 million hl per annum and is produced in five

Table 2
Production of ethyl alcohol by agricultural origin, 1980

(1 000 hl)	Molasses	Beets	Cereals	Wines	Fruits	Potatoes	Others	Total
EC 10	2 878	1 648	491	2 516	393	605	74	8 605
Belgium	114	0	2	0	0	0	0	116
Denmark	82	0	19	0	0	19	0	120
FR of Germany	242	0	83	0	54	561	0	940
Greece	206	0	0	84	77	0	0	367
France	569	1 648	0	1 432	3	0	44	3 696
Ireland	858	0	15	0	0	0	30	107
Italy	62	0	0	1 000	259	25	0	2 142
Netherlands	569	0	45	0	0	0	0	614
United Kingdom	176	0	327	0	0	0	0	504

Source: Eurostat (Zpa1), UEAES.

Table 3
Production of ethyl alcohol by agricultural origin, 1987

(1 000 hl)	Molasses	Beets	Cereals	Wine	Fruit	Potatoes	Other	Total
EC	3 642	1 925	808	5 419	384	444	117	12 739
Belgium	75	0	5	0	0	0	0	80
Denmark	93	0	11	0	0	15	0	119
FR of Germany	122	0	46	0	63	427	8	666
Greece	151	0	0	50	77	0	19	297
Spain	600	0	80	1 200	0	0	60	1 940
France	900	1 925	67	1 500	99	0	0	4 491
Ireland	40	0	10	0	0	0	23	73
Italy	869	0	306	2 659	105	2	0	3 941
Netherlands	598	0	19	0	0	0	7	624
Portugal	15	0	0	10	40	0	0	65
United Kingdom	179	0	264	0	0	0	0	443

Source: Eurostat (Zpa1), UEAES.

countries (Italy, France, Spain, Greece and Portugal) most of which benefits from Community intervention in wine growing.

Only France produces alcohol directly from sugar beet. National assistance in this subsector has been abolished as a consequence of the dismantling of the State monopoly.

The other categories of alcohol and spirits are less important, depending on market conditions for their raw materials (fruit, figs and potatoes, each of which represents less than 1 million hl per annum).

The leading producer of spirits is the UK which claims over a third of Community production. Some sectors are now recovering from deep depressions and others are still declining.

Consumption

Produktschap voor Gedistilleerde Dranken (Schiedam) publishes the alcohol consumption figures in terms of amounts of pure alcohol. This makes it possible to observe trends over given periods. Consumption levels are provided per capita for the whole population.

Table 5 shows the changes in total consumption of pure alcohol per capita in the 12 EC countries over the period 1960-87.

Those figures are broken down for the three main categories of alcoholic drinks (spirits, wine and beer) which appear in Table 6:

Table 4
Estimated annual production of spirits

(1 000 hl)	1983	1984	1985	1986	1987	1988
EC	9 050	8 950	9 500	9 600	9 600	N/A
Belgium	74	74	74	64	64	N/A
Denmark	79	87	93	77	74	N/A
FR of Germany (1)	1 080	1 055	1 031	997	976	N/A
Greece	105	105	105	105	105	N/A
Spain (2)	1 070	1 070	1 214	1 201	1 129	1 100
France (3)	2 200	1 800	2 150	2 100	2 060	2 280
Ireland	125	125	125	120	120	N/A
Italy	990	990	900	850	800	N/A
Luxembourg	3	2	2	2	2	2
Netherlands	378	325	311	306	296	302
Portugal	88	90	83	85	78	N/A
United Kingdom (4)	2 846	2 983	3 093	3 108	3 376	3 784

(1) Excluding Bouilleurs de cru. Structure: Weinbrand 27%, rum 10%, bitters 8%, liqueurs 9%, eau de vie (from fruit) 5%, miscellaneous 14%.
(2) Structure: brandy 35%, anis 10%, girebra 22%, rum 10%, whisky 7%, miscellaneous 16%.
(3) Structure: anis 27%, cognac 23%, cereal-based spirit 13%, rum 4%, others 33%.
(4) Structure: Scotch whisky 83%, vodka and gin 17%. Others not included.

Sources: National associations and UEAES.

Table 5
Consumption trends — pure alcohol

(litres per capita)	1960	1970	1980	1985	1986	1987
Belgium	6.4	8.9	10.8	10.5	10.3	10.7
Denmark	4.6	6.8	9.2	9.9	10.0	9.6
FR of Germany	6.8	10.3	11.5	10.8	10.5	10.6
Greece	5.3	4.7	6.7	6.2	4.6	5.4
Spain	8.6	12.1	14.1	11.8	11.7	12.7
France	18.2	17.3	14.4	13.3	13.2	13.0
Ireland	3.9	4.5	7.3	5.6	5.5	5.4
Italy	13.8	13.8	11.5	11.6	10.2	10.0
Luxembourg	11.1	10.1	18.4	13.0	12.7	13.0
Netherlands	2.5	5.6	8.8	8.5	8.6	8.3
Portugal	10.4	15.6	11.0	13.1	11.2	10.5
United Kingdom	5.1	6.4	7.1	7.1	7.1	7.3

Sources: Produktschap voor Gedistilleerde Dranken and UEAES.

- spirits, expressed in litres of pure alcohol,
- wine, expressed in litres of volume,
- beer, expressed in litres of volume.

Table 6
Alcohol consumption by country, 1987

(litres per capita)	Spirits (1)	Wine (2)	Beer (2)	Total (1)
EC	2.00	45.00	80.00	10.00
Belgium	2.15	23.00	121.10	10.70
Denmark	1.50	20.60	118.10	9.60
FR of Germany	2.24	25.80	144.20	10.60
Greece (3)	N/A	31.80	32.30	5.40
Spain	3.00	54.00	64.50	12.70
France	2.30	75.10	38.90	13.00
Ireland	1.70	6.00	75.00	5.40
Italy	1.00	79.00	25.60	10.00
Luxembourg	2.50	58.50	116.50	13.00
Netherlands	2.07	14.60	84.30	8.30
Portugal	.80	64.30	40.00	10.50
United Kingdom	1.73	11.00	110.50	7.30

(1) In litres of pure alcohol.
(2) In litres in state.
(3) Beer and wine only.

Source: Produktschap voor Gedietilleerde Dranken.

If it is assumed that the volume of wine consumed contains an average of 11% pure alcohol and that of beer an average of 4%, the consumption of pure alcohol works out to about 20% for spirits, 50% for wine and 30% for beer.

Trade

EC 12 is still the world's leading exporter of spirits, with Scotch and Irish whiskies and widespread brandies (cognac, armagnac, Weinbrand and French, Italian, Spanish, Greek and Portuguese brandies) leading the market, as well as liqueurs.

Over 80% of all Scotch whiskies sold during 1987 and 1988 were exported, with a substantial increase in exports during 1988.

Table 7
External trade in Scotch whiskies

(1 000 hl) (1)	1987	%	1988	%
UK domestic sales	446.0	15.7	451.7	15.5
Exports	2 401.7	84.3	2 459.7	84.5

(1) Pure alcohol equivalent.

Source: UEAES.

The 10 principal markets for Scotch whisky and whiskey produced in Northern Ireland are:

USA	18.2%
UK	15.5%
France	10.1%
Japan	5.8%
Spain	4.8%
Italy	4.1%
South Africa	3.3%
Australia	3.2%
Federal Republic of Germany	2.6%
Belgium-Luxembourg	2.0%
EC 12	45.0%

The second-ranking export item obviously is cognac, for which external trade is increasing as well.

Table 8
External trade in cognac

(1 000 hl) (1)	1987	%	1988	%
French domestic sales	33.2	8.6	35.2	8.3
Exports	354.1	91.4	390.0	91.7

(1) Pure alcohol equivalent.

Source: UEAES.

Table 9
Concentrations and mergers in the EC spirit drink industry

	1986	1987	1988	First quarter of 1989
Enterprises concerned and type of arrangement	Guinness plc acquires majority in Distillers Company plc, after previous purchase of Arthur Bell	I.B. Berentzen and Pabst und Richarz: merger Allied Lyons sells its 12% share in Bacardi to the Bacardi family Moët/Hennessy purchases Hine cognac from Guinness Allied Lyons acquires the remaining 49% share of the Canadian concern Hiram Walker	Whitbread takes over James Burrough (UK) The Canadian concern Seagram acquires Martell & Cie The Dutch Lucas Bols takes over the German Strohtman Asbach acquires all shares held by Doornaat Cointreau and Remy Martin: cooperation agreement Bruggeman acquires Fryns from the Irish Yoko Fresh Foods Allied Lyons and Suntory: cooperation agreement Pernod-Ricard obtains majority in Irish Distillers Group	Idv. International Distillers & Vintners acquires the Portuguese company Sileno Merger: the Danske Spirit-Fabrikker and the Danske Sukkerfabrikker Louis Royer is acquired by Suntory Idv. International Distillers & Vintners and Metaxa sign an agreement for the takeover of 100% in SEA Metaxa Distillers SA and of 30% in N. Kaloyannis Bros SA

Source: UEAES.

The 10 principal markets for cognac in 1987 were (in hl of pure alcohol):

USA	93 417
UK	47 585
Japan	44 120
France	35 155
Federal Republic of Germany	31 304
Hong Kong	30 193
Belgium	11 406
Netherlands	10 732
Singapore	10 332
Canada	7 696

Expanding markets are the US and the Far East (Singapore, Taiwan, Thailand, Hong Kong, Japan, Malaysia).

The principal external outlet for the German Weinbrand is the US as well, while Spanish brandy is a well-known product in Latin America. Italian and Greek emigrants remain loyal to their fatherland's products, their emigrant concentration being as far away as Australia. French, Dutch and Danish brand liqueurs can be found everywhere, as can British and Irish cream liqueurs. German-based eau-de-vie, which originates in the Black Forest, are appreciated in Japan and the US.

Some imported products such as US bourbon, Canadian whisky and Mexican tequila long ago made their entry. The Community has bilateral agreements with the US (for bourbon) and Yugoslavia (for slivovitch), for instance. Rum is imported from the Caribbean.

Structural change

Announcements made from 1986 until the beginning of 1989 indicate intensive regrouping in and outside the EC spirit-drink industries for the most part oriented to the expanded new market as from 1 January 1993 in Europe. In Table 9 we only report on the most significant of these regroupings.

UEAES: Union européenne des alcools, eaux de vie et spiritueux
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SCOTCH WHISKY

Summary

Scotch whisky is easily the European Community's leading net export earner among spirituous beverages with volume sales greater than the combined total of all other Community-produced spirituous beverages. It is also Scotland's leading net export earner and one of the top five in the United Kingdom. 15 000 are employed within the industry, with employment also provided in many ancillary industries, e.g. carton, label, cap, bottle and transport.

Production

Scotch whisky is distilled mainly from barley and maize. Barley, of malting quality, is bought almost entirely from UK farms. Maize is, in the main, imported from countries outside the EC. A small quantity of high-diastase barley is imported. Except for very small quantities of caramelized sugar, used solely to standardize the colour of the final product, all whiskies are distilled from natural ingredients, e.g. cereals, yeast and Scottish water.

Scotch whiskies can be divided into two main categories — malt whiskies and grain whiskies. The malt whiskies are distilled mainly in the Highlands and Islands, from malted barley; and grain whiskies mainly in the Lowlands, mostly from maize and malted barley. These whiskies are then matured for at least three years (the legal minimum) and in many cases for considerably longer periods. The great preponderance of malt whisky supplies is used for 'blending' with grain whisky to make the traditional 'blended' scotch whisky. But, in addition, there are 'single malts', the unblended product of a single malt whisky distillery.

Sales and exports

In 1988 world sales of Scotch whisky totalled 291 141 712 litres of pure alcohol (lpa), equivalent to almost one billion bottles (75 cl) at the traditional strength of 40% alc./vol. In terms of the smaller 70 cl bottle in which Scotch whisky is increasingly sold in the European Community, it comfortably passes the billion mark. Exports accounted for 245 969 856 lpa, an increase of 2% over the previous year which was also the third successive annual increase and the highest export figure since 1982. The value of these shipments rose by 12% to UKL 1 288 million.

The United States remains the largest individual export market for Scotch whisky, even though shipments in 1988 fell by 10% to 53 161 353 lpa, worth more than UKL 231 million. In 1988 shipments to France increased by 8% to 29 468 537 lpa, worth UKL 143 million and comfortably ahead of third place Japan.

Japan is a market of which the Scotch whisky industry has high hopes as a result of the changes brought about by the liquor tax reform on 1 April 1989. This follows the acceptance by Japan of a GATT ruling and its agreement to halve the tax on Scotch whisky and to match it with the tax levied on Japanese whiskies.

It is the European Community however which accounts for more than one third of Scotch whisky exports — over 85 million lpa worth UKL 462 million in 1988. Within the Community, Spain has shown remarkable growth to overtake Italy as the fourth largest market, with Germany and Belgium eighth and ninth respectively, Greece 10th and the Netherlands 11th.

The United Kingdom market

In its home market, Scotch whisky has weathered the challenge of other spirits and is still dominant. It still accounts for almost half of the spirits consumed in the United Kingdom and far more than its nearest rival. However, it has to contend with a British taxation system in which imported alcoholic drinks like table wine are taxed at a lower rate than domestic products such as Scotch whisky. Yet duty-paid figures of 45 171 800 lpa in 1988 still managed to show a modest increase of 1%.

Outlook

Scotch whisky is exported to over 180 markets and is on sale in every country in the world which does not specifically prohibit the import of spirits. However, it continues to face numerous barriers or restrictions to trade imposed by governments. While recognizing that the economics of some overseas countries make the early removal or reduction of some of these obstacles difficult to achieve, the industry attaches

the greatest importance to the sustained and determined effort being made by the European Commission and the British Government to seeking fairer trading conditions for Scotch whisky worldwide. The importance of this coordinated effort cannot be over-emphasized because, until a substantial reduction of trade barriers takes place, no significant growth in Scotch whisky exports can be expected.

Moreover, although the advent of the Scotch whisky Act 1988 and the recent EC Council of Ministers agreement on the EC Spirits Regulation will help to underpin Scotch whisky's reputation as a prestige product of the highest quality, a number of developments unfavourable to Scotch whisky worldwide exist. Apart from obstacles to trade, changing consumer preferences and perceptions Scotch whisky managed to maintain its worldwide performance.

The Scotch whisky industry is confident that the challenge can be met and that Scotch whisky's contribution to the economy of the United Kingdom and the European Community will be maintained.

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BREWING BEER

(NACE 427.1)

Summary

Brewing is the third largest branch of the food industry after dairy and meat products and is the largest of the secondary processing industries. Within the individual Member States, it is the largest food industry in Germany, Belgium and Luxembourg and the second largest in the UK and Denmark.

In 1987 there were 1 378 independent brewing companies in the Community employing some 162 700 persons (excluding Spain, Greece and Ireland), and producing 264 million hl of beer, 10 million hl of which were exported to non-Community countries. Within the Community the average annual per capita consumption of beer was 81.4 litres in 1988. The industry uses 5.5 million tonnes of malting barley each year.

Brewing beer fall under NACE 427.1 and malt, which is its raw material and will be considered afterwards, under NACE 427.2.

Production

Table 2 shows the number of active breweries, the number of independent brewing companies and the number of persons employed in 1987 in the Member States. Table 3 gives a breakdown of brewing plants by production. There is a strong trend towards concentration in the industry.

Table 1
Main Indicators, 1980-88
Brewing

(100 000 hl)	1980	1981	1982	1983	1984	1985	1986	1987	1988
Apparent consumption (1)	230.3	228.8	227.9	230.2	224.4	225.8	228.1	257.1	248.5
Net exports (1) (2)	5.6	6.3	7.1	7.2	7.6	7.4	7.6	7.3	8.0
Production (1)	235.9	235.1	235.0	237.4	232.0	233.2	235.7	264.0	256.5
Employment (1 000) (3)	N/A	N/A	N/A	N/A	N/A	N/A	157.5	162.7	N/A

(1) 1980-86: excluding Spain and Greece; 1988: excluding Greece and Portugal.
(2) Excluding the supply for ships.
(3) 1986: excluding Spain, Greece and Ireland; 1987: excluding France.

Source: CBMC.

Table 2
Structure of Industry

	Active breweries (plants)			Independent brewing companies		Employees		
	1986	1987	1988	1986	1987	1986	1987	1988
EC (1)	1 597	1 568	1 594	1 433	1 378	178 768	171 494	162 494
Belgium, Luxembourg	130	131	148	109	107	12 832	10 316	9 500
Denmark	23	22	22	18	17	7 200	5 900	5 100
FR of Germany	1 190	1 161	1 168	1 140	1 120	59 500	58 100	56 300
Greece	N/A	7	N/A	N/A	N/A	N/A	2 550	N/A
Spain	N/A	34	34	26	N/A	N/A	15 000	15 000
France	37	41	N/A	N/A	32	8 809	N/A	N/A
Ireland	7	7	7	5	4	N/A	3 532	3 194
Italy	24	23	25	12	12	5 020	5 100	4 640
Netherlands	20	21	N/A	14	15	9 625	9 745	9 221
Portugal	8	8	N/A	4	4	4 504	4 430	N/A
United Kingdom	117	113	113	68	66	50 000	48 000	44 000

(1) Estimated.

Source: CBMC.

Table 3
Division of brewing plants by annual production, 1987

(1 000 hl)	0-9		10-59		60-119		120-499		500-1 000		1 000 +	
	Plants	Output	Plants	Output	Plants	Output	Plants	Output	Plants	Output	Plants	Output
Belgium (1)	54	149	20	565	32	5 242	20	8 302				
Denmark	0	0	12	N/A	1	N/A	4	N/A	2	N/A	3	N/A
FR of Germany	611	1 946	327	8 476	83	7 194	89	20 913	29	19 352	22	34 621
France (2)	14	42	9	25	5	491	7	1 426	2	1 629	2	16 275
Ireland	0	0	0	0	1	N/A	3	N/A	2	N/A	1	N/A
Italy	1	6	1	56	0	0	11	3 923	9	6 051	1	1 086
Luxembourg	0	0	2	30	0	0	3	632	0	0	0	0
Netherlands	0	0	8	141	0	0	0	0	5	1 215	8	16 191
Portugal	0	0	1	48	1	88	3	819	1	512	2	3 510

(1) Categories for Belgium : 0-10; 11-63; 64-265; 265 +.
(2) Brewing companies.

Source: CBMC.

Table 4
Total beer production

(100 000)	1980	1981	1982	1983	1984	1985	1986	1987	1988
EC (1)	235.9	235.1	235.0	237.4	232.0	233.2	235.7	264.0	256.5
Belgium	14.3	13.8	14.6	14.2	14.3	13.9	13.7	14.0	13.8
Denmark	8.2	8.2	8.5	8.7	8.5	7.9	8.5	8.5	8.7
FR of Germany	92.3	93.7	94.8	95.0	92.6	93.3	94.1	92.8	92.6
Greece	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.8	N/A
Spain	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25.8	26.6
France	21.7	21.7	22.3	21.8	20.7	20.3	20.7	19.9	20.1
Ireland	6.0	5.8	5.6	5.5	5.4	5.5	5.4	5.0	5.1
Italy	8.6	9.0	10.2	10.1	9.1	10.3	11.1	11.1	11.3
Luxembourg	.7	.8	.8	.7	.6	.7	.7	.7	.6
Netherlands	15.7	16.6	16.2	17.3	17.0	17.5	18.0	17.5	17.5
Portugal	3.6	3.8	3.9	3.8	3.7	3.8	4.1	5.0	N/A
United Kingdom	64.8	61.7	58.1	60.3	60.1	60.0	59.4	59.9	60.2

(1) 1980-86 excluding Spain and Greece; 1988 excluding Greece and Portugal.

Source: CBMC.

Table 5
Total beer consumption

(100 000)	1980	1981	1982	1983	1984	1985	1986	1987
EC (1)	228.4	226.5	227.1	229.2	222.9	223.8	225.6	255.4
Belgium, Luxembourg	13.4	12.6	13.5	13.1	12.8	12.4	12.5	12.3
Denmark	6.7	6.7	6.8	7.1	6.9	6.6	6.7	6.4
FR of Germany	89.7	90.6	91.1	91.1	88.4	89.0	89.4	88.1
Greece	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.8
Spain	N/A	N/A	N/A	N/A	N/A	N/A	N/A	26.5
France	23.7	23.7	24.3	23.8	22.6	22.1	22.4	21.7
Ireland	4.2	4.0	4.0	3.8	3.8	3.9	3.7	3.3
Italy	9.5	10.1	11.6	11.8	10.8	12.4	13.2	13.2
Netherlands	12.2	12.8	11.7	12.6	12.0	12.2	12.5	12.4
Portugal	3.5	3.7	3.7	3.7	3.5	3.7	4.0	4.8
United Kingdom	65.5	62.3	60.4	62.2	62.1	61.5	61.2	62.9

(1) 1980-86 excluding Spain and Greece.

Source: CBMC.

Table 6
Per capita consumption of beer

(litres)	1980	1981	1982	1983	1984	1985	1986	1987	1988
EC average (1)	84.3	83.5	83.6	84.1	81.7	81.9	82.3	78.6	81.4
Belgium, Luxembourg	130.8	124.0	131.9	128.0	125.2	120.9	122.1	120.8	118.9
Denmark	130.7	131.0	133.7	138.8	134.0	129.2	130.0	125.2	126.5
FR of Germany	145.7	147.0	147.9	148.3	144.8	145.8	146.5	144.3	144.1
Greece	N/A	N/A	N/A	N/A	N/A	N/A	N/A	38.3	N/A
Spain	N/A	N/A	N/A	N/A	N/A	N/A	N/A	66.8	68.7
France	44.3	44.0	44.8	43.7	41.2	40.1	40.4	38.9	39.2
Ireland	121.7	116.4	115.0	108.0	108.4	109.0	104.5	93.5	94.4
Italy	16.7	17.9	20.6	20.7	18.9	21.7	23.0	23.0	22.5
Netherlands	86.4	89.6	82.0	87.5	83.4	84.4	86.0	84.3	83.3
Portugal	35.0	37.0	37.4	37.0	35,5	36.9	39.5	47.0	N/A
United Kingdom	117.1	111.5	107.3	110.5	110.1	108.9	107.8	110.5	111.2
USA	91.9	92.6	91.5	91.1	89.6	88.9	90.0	88.9	N/A

(1) 1980-86 excluding Spain and Greece; 1988 excluding Greece and Portugal.

Source: CBMC.

Table 7
Estimated share of total beer sales consumed in private homes

(%)	1980	1981	1982	1983	1984	1985	1986	1987
Belgium, Luxembourg	N/A	57	57	57	58	57	N/A	32
Denmark	77	78	78	78	74	74	74	74
FR of Germany	60	60	60	60	60	60	60	60
Ireland	6	N/A	N/A	N/A	6	6	5	6
Netherlands	60	60	60	N/A	N/A	N/A	N/A	N/A
Portugal	24	24	22	22	22	38	33	35
United Kingdom	12	12	13	15	16	16	17	18

Source: CBMC.

Table 8
Production and external trade (1)
Brewing industry

(hundred thousand hl)	1980	1981	1982	1983	1984	1985	1986	1987
Production	235.9	235.1	235.0	237.4	232.0	233.2	235.7	234.4
Index	101.2	100.8	100.8	101.8	99.5	100.0	101.1	100.5
Imports extra-EC	.8	.6	.8	.9	.6	1.4	.9	1.0
Index	57.1	42.9	57.1	64.3	42.9	100.0	64.3	71.4
Exports extra-EC (2)	5.3	6.0	7.0	7.2	7.8	8.1	8.9	8.0
Index	65.4	74.1	86.4	88.9	96.3	100.0	109.9	98.8
X/M	6.6	10.0	8.8	8.0	13.0	5.8	9.9	8.0

(1) Excluding Greece and Spain.
(2) Excluding the supply for ships.

Source: CBMC.

While the Community is producing surplus cereals, the brewing industry is short of its own raw material: malting barley. Between 1979 and 1984 the areas given over to growing malting barley in the EC dropped by almost 50%, leading to prices above threshold levels and imports of barley from third countries. The situation is still unsatisfactory.

Consumption

Table 4 shows total beer production in 1980-88 and Table 5 total beer consumption in the same period. Over the past few years the consumption of beer has not increased, due to changing trends in beverage consumption and lifestyle. Table 6, which indicates

consumption of beer per head, shows where some changes have occurred within the overall trend.

Probably the most important problem facing the European brewing industry is the stagnation of domestic beer consumption. Consumption in 1987 was at a similar level to that in 1970. As a result, third-country markets are becoming increasingly important to European beer producers.

Trade

Exports to third countries have grown although they represent a very small portion of total production. Over the same period imports have remained at a very low level. The internal consumption of the EC Member States has not increased.

CBMC: Communauté de travail des brasseurs du marché commun
Address: Boulevard du Souverain, 191-197, Box 10, B-1160 Brussels
Tel: (32 2) 672 23 92; Telefax: 660 94 02

MALT

(NACE 427.2)

Summary

The EC malt industry processes approximately 4.9 million tonnes of malt annually, which represents one third of world malt production. The main EC malt-producing countries are Belgium, France, Germany and the UK. Other malt producing Member States of significance are Denmark, Ireland, Italy and the Netherlands. Two categories of malt are produced: brewing malt, which accounts for 95.5% of the tonnage produced, and whisky malt.

Production

The value-added content of malting is low. In the Community, the raw material (barley) represents between 75% and 80% of the ex-factory sales price. To remain competitive on the world market, the European maltsters therefore have to manage their supply of the raw material as rationally as possible. Only certain varieties of barley can be used for brewing. Moreover, the barley has to meet stringent quality criteria in terms of germination energy, protein content, and diastatic power.

The trends in malt exports followed the evolution of beer production. World beer production currently stands at around 1 000 million hl/year and increases annually by about 2.3%. Production is concentrated in the northern hemisphere (800 million hl), where consumption is stagnating. The past 15 years have seen a remarkable development of beer production and consumption in South and Central America (+6%/year), Asia (+11%/year) and Africa (+6%/year). As barley growing is difficult in these parts of the world, market opportunities for malt exporting countries in these areas are substantial.

Trade

According to FAO statistics, the total world malt trade amounts to 2.73 million tonnes of malt (including the EC intra-Community trade of 758 000 tonnes), which represents an equivalent (in terms of imports) of ECU 702 million, i.e. about 260 ECU/tonne. This trade represents 18% of world malt production which is estimated at 14 million tonnes.

Table 9
Main indicators, 1980-87 (1)
Malt

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987
Apparent consumption	4 017	3 649	3 898	3 758	3 769	3 711	3 632	3 727
Net exports	963	1 219	1 122	1 268	1 020	1 089	1 118	1 233
Production (2)	4 980	4 868	5 020	5 026	4 789	4 800	4 750	4 960

(1) EC 9.
(2) UK malt for whisky estimated 1985, 1986 and 1987. Estimates for Denmark in 1987 and for Ireland in 1986 and 1987.
Source: Euromalt.

Table 10
Maltings, 1987/88

	B	DK	D	F	IRL	I (1)	NL	UK	Total
Independent	8	4	70	10	3	3	4	14	116
Associated to breweries	2	2	35	1	2	1	1	8	52
Associated to other industries	0	0	0	0	1	1	0	6	8
Total	10	6	105	11	6	5	5	28	176

(1) 1985 figures.
Source: Euromalt.

Table 11
Number and total capacity of maltings (plants), 1987-88

	0-9	10-19	20-29	30-39	40-49	50-99	100-200	200 +	Total
Number of plants									
Belgium	1	2	1	0	0	4	2	0	10
Denmark	2	0	2	1	0	1	0	0	6
FR of Germany	62	16	10	8	3	5	1	0	105
France	1	1	0	1	1	1	5	1	11
Ireland	1	3	0	0	1	1	0	0	6
Italy	1	2	0	0	2	0	0	0	5
Netherlands	1	0	1	1	0	2	0	0	5
United Kingdom	12	5	0	1	1	2	6	1	28
Total	81	29	14	12	8	16	14	2	176
Total capacity (million tonnes)									
Belgium	6	37	30	0	0	345	245	0	663
Denmark	11	0	50	40	0	70	0	0	171
FR of Germany	215	210	220	250	120	330	200	0	1 545
France (1)	N/A	28	0	N/A	N/A	134	1 099	N/A	1 260
Ireland	3	45	0	0	35	80	0	0	163
Italy (2)	2	26	0	0	95	0	0	0	123
Netherlands	3	0	28	35	0	130	0	0	196
United Kingdom (3)	39	73	0	N/A	77	139	1 153	N/A	1 480
Total (1)	N/A	697	328	N/A	N/A	1 879	2 697	N/A	5 601

(1) Classes used are : 0-19; 20-29; 30-100; 100+.
(2) 1985 figures.
(3) Classes used are : 0-9; 10-19; 20-29; 30-49; 50-100; 100+.
Source: Euromalt.

EC exports to third countries amounted to 1.27 million tonnes in 1988, which makes the EC by far the most important malt exporter in the world. In 1988, EC exports to third countries were geographically divided as follows:

European third countries	100 000 tonnes
Africa	335 000 tonnes
Central & South America	438 000 tonnes
Asia	390 000 tonnes

In 1986, the EC's main competitors on the world market were, in order of importance:

	1986 exports
Australia	258 000 tonnes
Canada	140 000 tonnes
USA	39 000 tonnes
Eastern Europe	280 000 tonnes

The brewing process is adjusted once yearly, in accordance with the qualities of the brewing malt, which change from year to year. For technical reasons, therefore, the purchase of malt is subject to an annual cycle in the EC and world- wide. This cycle depends on the barley harvest in the northern hemisphere, where 85% of the malt is produced. Pro-

Table 12
Production and external trade

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987
Production (1) (2)	4 980	4 868	5 020	5 026	4 789	4 800	4 750	4 960
Index	103.8	101.4	104.6	104.7	99.8	100.0	99.0	103.3
Imports extra-EC	55	46	40	47	56	60	57	61
Index	91.7	76.7	66.7	78.3	93.3	100.0	95.0	101.7
Exports extra-EC (2)	1 018	1 265	1 162	1 315	1 076	1 149	1 175	1 294
Index	88.6	110.1	101.1	114.4	93.6	100.0	102.3	112.6
X/M	18.5	27.5	29.1	28.0	19.2	19.2	20.6	21.2

(1) Excluding Greece, Spain and Portugal.
(2) UK malt for whisky estimated 1985, 1986 and 1987. Estimates for Denmark in 1987 and for Ireland in 1986 and 1987.
Source: BIOS.

cessing of the new crop takes place in the period from December (when the new barley is mature), to November the following year. In order to cover the yearly purchasing and processing cycle of the breweries, the EC malting plants need licences with a validity of 12 months.

In 1988 intra-Community trade amounted to 758 000 tonnes, or about 28% of world trade in the same year. On the basis of extra- and intra-Community trade, the EC accounted for 74% of total world malt trade.

Industry structure

About two-thirds of the EC malting plants operate independently, while one-third are associated with other industries, predominantly breweries. In 1988, there were about 175 EC malting plants, of which 100 were situated in Germany. The malting industry is capital intensive and its investments require many years to repay.

Outlook

The medium-term outlook for the Community malt industry is good. The consumption of beer has stabilized in Europe, while it has increased in third countries which do not produce barley.

Euromalt: Comité européen des malteries de la CE
Address: Rue de l'Orme, 19, B-1040 Brussels
Tel: (32 2) 733 12 64; Telex: 61473; Telefax (32 2) 734 67 02

SOFT DRINKS

(NACE 428.2)

Summary

In this context, 'soft drinks' means non-alcoholic beverages consisting of water, flavouring substances, sugars or intensive sweeteners. Waters (mineral waters and other categories) sharing item 428 of the NACE classification system with soft drinks are not included, nor are fruit juices and nectars.

Current situation

Production in EC 11 increased by approximately 2.2%, to about 16 billion litres in 1987. Average consumption per capita in the EC increased by 4%. A large part of this increase is due to the UK, where consumption per capita rose almost 20%. Total employment grew by 3.6%, reaching 88 582 persons in 1987, but the number of production units within the EC is pursuing a continuing decreasing trend.

Differences between EC countries are very marked. For example, the annual per capita consumption of ready-to-drink beverages in the Federal Republic of Germany is 77 litres but only 27 litres in Portugal. Cola drinks account for 50% of total consumption in Belgium but only 17% in Portugal. Differences in taste, tradition and economic and sociological situation explain these widely variable consumption patterns.

Description of the sector

The largest category of soft drinks are made with extracts of fruits or plants. The market share of fruit-flavoured drinks varies from one country to another. Cola is the predominant flavour, followed by orange, lemon and other fruits, with some of the more recent products using exotic fruit flavours. In some countries, e.g. the UK, Ireland and to a certain degree, France, concentrates represent a very sizeable volume in comparison with ready-to-drink beverages. Low-calorie soft drinks, in which sugar is replaced by intensive sweeteners, are also new products with a relatively small share of the market but are growing fast. This is particularly noticeable in Germany and the UK.

Consumption

The increase of volumes has been a steady phenomenon ever since the Second World War and can be explained by the preference of the consumers for non-alcoholic drinks, the increase in purchasing power, leading to greater sophistication and diversification of drinks and the development of new packaging systems.

It is to be underlined that in some countries (e.g. Denmark) development has been slower or has stagnated over the past few years. This is largely due to excessive taxation of soft drinks (punitive excise duties and high VAT rates), sometimes combined with obstacles to the development of new packaging systems.

Other negative factors are the stagnation of population growth and the ageing of the population.

Trade

Intra-Community trade has not developed much except in the Benelux countries. This is due, to a large extent, to the fact that the Benelux countries

Table 1
Main Indicators, 1987

(million litres)	B	DK	D	GR	E	F	IRL	I	NL	P	UK	EC
Apparent consumption	671	207	4 705	410	2 170	1 663	179	1 540	840	265	3 332	15 982
Total net exports	74	10	12	N/A	30	- 66	11	N/A	184	0	- 44	N/A
Production	745	217	4 717	410	2 200	1 597	190	1 540	1 024	265	3 288	16 193
Consumption (1)	68	39	77	41	55	28	51	27	59	27	59	N/A
Number of enterprises (2)	27	4	150	20	110	61	30	115	14	83	108	732
Employment (number)	2 817	677	17 700	3 170	16 874	12 367	2 700	9 172	2 094	3 371	17 640	88 582

(1) Litres.
(2) Enterprises with 20 or more employees.

Source: Unesda.

Table 2
Consumption by category, 1987

(%)	B	DK	D	GR	E	F	IRL	I	NL	P	UK
Colas	50	30	40	50	37	25	24	34	42	17	38
Other carbonated drinks	49	65	52	42	61	47	76	66	57	70	60
Still drinks	1	5	8	8	2	28	0	0	1	13	2

Source: Unesda.

Table 3
Packaging used, 1987

(%)	B	DK	D	GR	E	F	IRL	I	P	UK
Returnable glass	46	91	69	52	74	35	19	12	87	16
Non-returnable glass	2	0	7	0	3	19	8	6	1	7
PVC/pet	39	0	1	23	13	29	51	60	7	39
Cans	9	0	14	22	7	12	18	16	4	26
Cartons	1	5	0	0	0	2	0	1	1	7
Pre/post mix	3	4	9	3	3	3	4	5	0	12

Source: Unesda.

have harmonized their legislation on soft drinks. On the other hand, the regulations of other countries often differ widely as regards products, packaging, taxation, etc. In the Benelux countries for example, mixed artificial sweeteners are not authorized while they are accepted by the UK legislation.

Structural changes

In all countries, there is a trend towards concentration, and the number of producers is gradually decreasing. The modernization of production methods, equipment, transport, etc. increases the need for concentration as does the imperative of maintaining a sufficient profit margin in the face of stiff competition.

The development of lighter, non-refillable containers, such as cans, plastic (PET) and disposable glasses, has been highly variable from one country to another. While the percentage of refillable glass used for soft drinks is 100% in Denmark and about 90% in the Netherlands and Portugal, the situation is quite different in most other countries, where other types of packaging have developed to various degrees. A decision of the European Court ruled in 1988 that Denmark could keep its bottle system for soft drinks and maintain its ban on the sale of soft drinks in cans or non-returnable bottles. The Court's ruling thus gave priority to Danish arguments for the protection of the environment from cans littered about the countryside over arguments that this system inhibits free trade in beverages. In the UK, refillable glasses now represent less than 16% of soft-drink packaging.

Outlook

For 1988, the available figures indicate a new increase in volumes in most countries (e.g. 6.2% in Germany, 5.1% in Belgium). Average growth will probably be around 6%.

Unesda: Union of EC Soft Drinks Association
Address: Avenue Général de Gaulle 51, Boîte 5, B-1050 Brussels
Tel: (322) 649 12 86; Telefax: (322) 640 13 39

TOBACCO

(NACE 429)

Summary

In 1986 the tobacco manufacturing sector supported over 1.7 million full-time jobs. Direct employment in the tobacco manufacturing industry accounts for 0.3% of manufacturing output in the EC. The EC is a net exporter of manufactured tobacco products, but a net importer of tobacco due to large imports of raw tobacco from the United States. A high intra-Community trade accounts for a high percentage of trade in manufactured tobacco products. The sale of tobacco products within the Community resulted in taxes which make up 4% of all central government tax receipts.

Description of the sector

The tobacco industry's backward linkages are the relationships between the manufacturers and the suppliers of the raw materials such as cigarette paper, filters, and machinery. Forward linkages are the relationships between the manufacturer and the distributers and retailers of tobacco.

Manufactured tobacco products can be allocated to three categories:

- cigarettes
- cigars and cigarillos
- other tobacco products (smoking tobacco, snuff, chewing tobacco, cut cigarette rag and agglomerated sheet).

At the beginning of the chain are the tobacco growers and persons engaged in the leaf proccessing of the raw tobacco. Both the lighter types of leaf such as light air-cured (e.g. Burley) and flue-cured (e.g. Virginia) and the heavier more oriental types such as the sun-cured and dark air-cured are grown in the EC.

Current situation

Apparent consumption of tobacco products has increased steadily over the past nine years, with a 5.9% growth in 1987 and a 6.0% growth in 1988. Net exports of manufactured tobacco products fell in 1987 to ECU 565 million, but recovered slightly in 1988 at ECU 609 million. Production grew slightly more rapidly than consumption, growing by 7.3% in 1987, 6.0% in 1988 and 7.4% in 1989. Employment has remained fairly steady for the past three years, at around 105 000.

Production and consumption

Tobacco production had a growth rate of 7.3% in 1987, 6% in 1988 and 7.5 % in 1989.

Tobacco growing

Italy has been the largest producer of tobacco leaves throughout the 1980s, with a 40% share of the production; however, Greece has been a close contender and even exceeded Italy's production in 1986. Production of tobacco leaves increased from 382.5 thousand tonnes in 1986 to 386.6 thousand tonnes in 1987. The EEC produced 385 thousand tonnes of tobacco leaves in 1988 — 6% of the world's production. The world's largest producer of tobacco leaves is China, which produced 2 309 thousand tonnes in 1988; other large producers include the USA, Brazil, the USSR and India.

Manufactured tobacco products

Unlike total tobacco production, cigarette production fell from 1985 to 1987 with an increase in production in 1988. Cigarette production accounts for 87.5% of total tobacco production. The Federal Republic of Germany, the largest producer of cigarettes, registered a fall in production after 1986, after having experienced an increase in production since 1982. In 1987 production in the Federal Republic of Germany was 162 940 million pieces. The next largest producers in 1987 were the United Kingdom, Spain, Italy, France and the Netherlands.

The total level of production of cigars and cigarillos in the EC in 1986 was 8 470 million pieces which was a 13.7% fall from 1982; this reflects higher taxation and prices of these products, and a shift in consumer preferences. Belgium remains the largest producer of cigars and cigarillos, having produced 2 104 million pieces in 1986. The Netherlands has been the leading producer of other tobacco products. Production of

Table 1
Main indicators, 1980-89 (1)
Tobacco manufacturing

(million ECU)	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Apparent consumption	19 143	21 469	26 015	28 157	29 500	31 194	32 114	34 006	36 052	N/A
Net exports (2)	435	598	623	752	701	636	808	565	609	N/A
Production	19 578	22 067	26 638	28 909	30 201	31 830	32 922	34 571	36 661	39 402
Employment (1 000)	118.1	121.4	115.9	115.2	108.9	104.0	110.4	103.2	105.7	105.5

(1) 1980 EC 9; 1981-85 EC 10; 1986-88 EC 12 (estimated).
(2) 1988 excluding Greece.
Source: Eurostat (Inde, Bise, Comext).

Table 2
Production of tobacco leaf

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987
EC	333.2	353.8	375.2	356.2	394.9	405.8	382.5	386.6
Belgium	1.2	1.4	2.1	2.0	2.1	2.1	2.3	1.1
FR of Germany	6.9	7.8	8.1	6.8	7.2	8.1	7.8	7.6
Greece	116.7	127.4	132.4	110.5	143.1	148 5	148.1	144 1
Spain	36.9	43.5	42.2	42.6	43.2	42 1	37.5	36.2
France	44.7	41.6	43.8	36.2	35.1	35.7	37.8	33.9
Italy	125.5	131.0	145.0	156.1	161.1	165.8	145.3	160.4
Portugal (1)	1.0	1.2	1.4	2.0	3 1	3.5	3.7	3.3

(1) Excluding the Azores: approximately 5 000 tonnes in 1982 and 5 160 tonnes in 1986.
Source: EC Tobacco Division; Serv. Nacional de Cult. y Ferment. de Tobacco (E), Pieda.

Table 3
Production of raw leaf

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987	1988
World	5 297	5 962	6 890	5 935	6 486	6 994	6 032	6 142	6 433
EC (1)	333	354	375	356	395	406	383	387	385
Five largest non-EC producers									
China	920	1 520	2 205	1 403	1 816	2 450	1 732	1 926	2 309
USA	811	936	905	648	784	686	528	543	592
India	439	481	520	582	493	490	439	460	323
Brazil	405	366	420	393	414	411	387	410	415
USSR	287	268	307	385	378	381	374	303	381

(1) Figures from FAO for 1988.
Source: FAO and Eurostat.

Table 4
Cigarette production

(millions)	1980	1981	1982	1983	1984	1985	1986	1987
EC	666 392	667 347	631 945	637 616	640 308	649 252	630 849	624 387
Belgium, Luxembourg	26 454	26 921	28 710	28 042	27 650	28 363	26 928	26 877
Denmark	9 223	9 802	9 920	9 763	10 583	10 966	11 246	11 162
FR of Germany	157 900	167 816	148 166	155 942	162 055	165 587	169 048	162 940
Greece	24 889	25 404	24 533	25 336	27 018	28 523	29 000	28 853
Spain	85 000	93 500	68 220	63 600	75 100	77 270	76 500	80 500
France	72 478	62 454	62 510	62 147	60 729	67 376	59 122	54 160
Ireland	7 887	7 467	8 136	7 534	7 389	7 735	7 720	7 700
Italy	73 105	72 248	80 550	83 672	80 435	78 674	75 585	70 339
Netherlands	40 705	38 732	42 977	45 303	45 101	46 711	49 935	52 355
Portugal	13 133	13 363	13 613	14 329	13 875	14 077	13 743	14 966
United Kingdom	155 618	149 640	144 610	141 948	130 473	123 970	112 022	114 535
USA	N/A	N/A	N/A	N/A	662 000	665 000	662 000	654 000

Source: USDA FT and US Industrial Outlook.

Table 5
Production of other tobacco products, 1982, 1986

(million units)	1982 Cigars (4)	1982 Other products (tonnes)	1986 Cigars (4)	1986 Other products (tonnes)
EC (1)	9 823	72 396	8 470	69 934
Belgium	2 330	4 814	2 104	5 588
Denmark	631	3 904	624	3 752
FR of Germany	1 701	10 899	1 433	9 079
Greece	1	11	1	11
Spain (2)	588	2 930	496	1 350
France	906	5 891	825	4 920
Ireland	N/A	3 000	N/A	3 930
Italy	111	668	111	347
Netherlands	2 300	28 900	1 634	32 300
Portugal (3)	0	167	2	182
United Kingdom	1 255	11 225	1 240	8 475

(1) Excluding Luxembourg.
(2) Including production in the Canaries.
(3) Including production in Azores.
(4) Including cigarrillos.

Source: Pieda.

other tobacco products fell between 1982 and 1986 by 3.4% to 69 934 tonnes.

Consumption

In no EC country is domestic production below 60% of domestic consumption. There was a slight fall in total EC consumption of cigarettes in 1987, both at an absolute level and per capita. This fall was preceded by a gradual increase in consumption since 1982. Germany has continued to be the largest consumer of cigarettes, consuming 123 998 million pieces in 1987; Greece however has the largest per capita consumption of cigarettes — 2 947 per head in 1987.

Employment

About 1.7 million people were employed in tobacco-related activities in 1986; however, this figure is about three times smaller after revisions for actual involvement in the tobacco industry are taken into account, as an important part of work is part-time or seasonal. It should still be noted that the total number of people engaged in tobacco growing and in specialized tobacco outlets (670 850 persons) far exceeds those engaged in tobacco manufacturing or its supplying companies.

In 1986 94 050 people were employed in tobacco manufacturing; this represents a 19.7% fall from 1982. 835 850 people were employed in tobacco growing (first processing); however, since most tobacco growers produce other cash crops, the real measurement — full-time equivalent (FTE) — is a much better reflection of the industry. The FTE is the estimation of the number of full-time jobs which would provide the equivalent labour expended by all those engaged in tobacco-related activity. In 1986 the FTE was 233 400. The United Kingdom employed the largest number of people in tobacco manufacturing — 21 500, followed by the Federal Republic of Germany with 18 000 people in tobacco manufacturing. Greece has employed the highest number of workers in tobacco growing — 406 400 people, the number of jobs being still high even after being adjusted — 128 100 full-time equivalent jobs.

Industry structure

There are two industrial set-ups; first, the publicly owned monopoly which exists in Italy, Portugal,

Table 6
Cigarette consumption

(billions)	1981 Total	1981 Per capita (No)	1982 Total	1982 Per capita (No)	1983 Total	1983 Per capita (No)	1984 Total	1984 Per capita (No)	1985 Total	1985 Per capita (No)	1986 Total	1986 Per capita (No)	1987 Total	1987 Per capita (No)
EC	616.1	1 930	576.0	1 800	576.1	1 797	589.9	1 836	596.6	1 853	581.0	1 801	579.8	1 795
Belgium, Luxembourg	17.0	1 666	19.7	1 608	18.6	1 820	18.1	1 775	16.5	1 611	14.2	1 388	13.1	1 284
Denmark	8.4	1 648	8.3	1 630	8.4	1 646	8.7	1 706	8.8	1 732	8.5	1 669	8.4	1 629
FR of Germany	133.3	2 161	114.3	1 855	117.7	1 917	122.7	2 006	123.2	2 019	121.8	1 998	124.0	2 033
Greece	26.7	2 740	25.7	2 623	25.8	2 620	27.3	2 754	28.5	2 859	28.9	2 888	29.5	2 947
Spain	95.5	2 529	69.3	1 827	64.1	1 680	75.6	1 970	77.9	2 018	76.8	1 979	80.8	2 071
France	85.9	1 585	87.0	1 696	89.6	1 637	95.2	1 731	96.2	1 744	94.6	1 708	94.2	1 694
Ireland	5.2	1 525	7.0	2 005	7.1	2 011	6.5	1 848	6.4	1 798	6.3	1 751	6.2	1 745
Italy	98.0	1 734	106.4	1 879	108.4	1 907	105.8	1 856	112.8	1 977	105.2	1 842	98.4	1 719
Netherlands	22.6	1 582	22.8	1 595	24.6	1 710	17.5	1 214	15.6	1 072	15.9	1 091	15.3	1 044
Portugal	13.2	1 326	13.4	1 339	14.2	1 409	13.7	1 355	13.9	1 368	13.7	1 332	14.9	1 529
United Kingdom	110.3	1 956	102.0	1 811	98.7	1 750	98.7	1 747	96.9	1 714	96.0	1 696	95.0	1 670

Source: USDA FT.

Spain and France and, secondly, the private-sector companies that exist in Belgium, Germany, Greece, Ireland, the Netherlands and the UK. The publicly owned monopolies mainly cater for internal consumption, with foreign brands being priced more highly. The private-sector companies on the other hand have to compete with foreign brands both on the domestic and foreign markets.

Similarly, on the distributing and retailing side, countries such as the Federal Republic of Germany and the UK have fairly varied tobacco distribution networks, whilst countries such as Italy and France have systems of licensed outlets.

Geographic features

The main tobacco leaf growers are Belgium, France, the Federal Republic of Germany, Greece, Italy, Poland and Spain. It is a significant source of income and employment in poorer rural areas. Greece grows more labour-intensive oriental varieties of tobacco, whilst Italy tends to grow the less labour-intensive light air-cured and flue-cured varieties.

The north European countries lead in the second tier of the tobacco industry — manufacturing , with Germany and the UK as the major manufacturers of tobacco products. On a regional basis, the tobacco industry first established itself in Europe in the then centres of industry and population.

Trade

There are two opposing forces in the trade balance. While there has been a net export surplus for manufactured tobacco products, this has been outweighed by a net export deficit for raw tobacco.

The EC external balance of trade for tobacco products was ECU 808 million in 1986 and fell to ECU 565 million in 1987; there was a small recovery in 1988 when the trade balance registered ECU 609 million.

If intra-EC trade flows are excluded, the trend is similar although the actual levels are much lower. There was a net export surplus for tobacco products to countries outside the EC of ECU 526.4 million in 1986. Imports of tobacco products from outside the EC were ECU 83.4 million and exports were ECU 609.8 million. In 1987 the trade balance for tobacco products (again excluding intra-EC trade) fell to 246.8.

The main tobacco product is cigarettes, which have accounted for about 89% of the trade balance. Both cigarettes and other products, which include smoking tobacco, snuff, chewing tobacco and agglomerated sheet have displayed a trade surplus, while the trade in cigars, cigarrillos and cheroots has been more or less balanced. The largest net exporters of tobacco products were the Netherlands, the Federal Republic of Germany and the UK, mainly exporting cigarettes to other EC countries.

Table 7
Employment in the tobacco industry, 1982, 1986

	Tobacco manufacturing		Growing and first processing (1)			
	1982	1986	1982		1986	
			Persons engaged	Full-time equivalents	Persons engaged	Full-time equivalents
EC	117 250	94 050	896 700	253 200	835 850	233 400
Belgium	6 350	5 600	3 300	600	3 300	650
Denmark	2 300	2 250	0	0	0	0
FR of Germany	22 500	18 000	17 650	340	14 350	3 450
Greece	4 050	3 850	414 800	141 100	406 400	128 100
Spain	13 150	10 050	50 100	17 300	54 150	15 700
France	8 400	7 950	87 750	17 450	70 300	16 750
Ireland	2 200	1 800	0	0	0	0
Italy	14 800	13 100	316 400	70 550	272 300	64 800
Luxembourg	350	350	0	0	0	0
Netherlands	8 850	7 450	0	0	0	0
Portugal	1 900	2 150	6 700	2 800	15 050	3 950
United Kingdom	32 400	21 500	0	0	0	0

(1) Includes employment in tobacco reconstitution, but not in first processing for FR of Germany. Excludes employment in tobacco first processing for France and Portugal.

Source: Pieda.

Table 8
External trade
Tobacco leaf

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987	1988
Imports									
World	1 416	1 502	1 487	1 428	1 433	1 415	1 375	1 394	1 303
EC	628	601	604	617	605	504	574	609	550
Five largest non-EC importers									
USA	196	239	243	209	213	202	207	221	215
USSR	83	105	124	101	103	95	67	54	N/A
Japan	65	83	84	80	75	61	68	88	69
Egypt	25	33	43	49	49	44	47	42	35
Bulgaria	12	14	20	26	42	30	41	21	38
Exports									
World	1 350	1 487	1 429	1 334	1 383	1 391	1 330	1 336	1 341
EC	163	181	216	215	240	222	232	285	270
Five largest non-EC exporters									
USA	272	265	260	238	246	249	217	195	203
Brazil	144	149	166	177	187	199	176	174	175
Zimbabwe	93	129	86	84	90	98	99	100	103
Turkey	84	131	105	70	70	103	82	106	80
India	71	112	110	79	76	64	62	53	58

Source: FAO.

For raw tobacco there is normally a trade deficit. Looking at trade between the EC and the rest of the world in 1986 there was a trade deficit of ECU 1 643.8 million for raw tobacco. This fell to ECU 1 403.1 million in 1987 with imports at ECU 1 622.1 million and exports at ECU 219 million. The US accounted for a high percentage of the trade — about 37.5% of imports of raw tobacco, and about 27% of exports of raw tobacco.

The overall trade balance has therefore been in deficit. Trade between the EC and the rest of the world was ECU 1 138 million in 1985, ECU 1 117.4 million in 1986 and ECU 1 156.3 million in 1987. These numbers do not include other tobacco-related products such as tobacco machinery, cigarette paper and filters and marketing, etc. which would probably make the EC a net exporter.

If cigarette consumption is declining in the United States and Europe, world cigarette consumption is growing in real terms, especially in Eastern bloc and developing countries. Asian markets are opening too. Estimates given by Euromonitor and published in the *Economist* (26 August 1989) expect a global consumption growth of 1.9 % a year between 1988 and 1992. The number of cigarettes smoked per head, per country in 1988 are the following: Poland

Table 9
External trade
Raw and processed tobacco

	1983		1984		1985		1986		1987	
(million ECU)	Extra-EC	USA	Extra-EC	USA	Extra-EC	USA	Extra-EC	USA	Extra-EC	USA
Raw imports	1 685.9	615.9	1 786.7	672.6	1 984.7	735.6	1 868.3	726.0	1 622.1	634.2
Processed imports	71.5	23.2	193.0	35.1	101.2	50.0	83.4	44.9	346.3	41.6
Total imports	1 757.4	639.1	1 979.7	707.6	2 085.9	785.6	1 951.7	770.9	1 968.4	675.8
Index	84.3	81.4	94.9	90.1	100.0	100.0	93.6	98.1	94.7	86.0
Raw exports	240.2	56.0	257.7	67.0	226.7	54.2	224.5	77.4	219.0	63.4
Processed exports	706.4	23.0	669.7	25.2	721.2	31.2	609.8	24.6	593.1	26.7
Total exports	946.6	78.8	927.2	92.2	947.9	85.4	834.3	102.0	812.1	90.1
Index	99.9	92.3	97.8	108.0	100.0	100.0	88.0	119.4	85.7	105.5
X/M	.54	.12	.47	.13	.45	.11	.43	.13	.41	.13

Source: Eurostat (Comext).

Table 10
External trade
Tobacco products

(1 000 tonnes)	1980	1981	1982	1983	1984	1985	1986	1987
Imports								
World	324	398	429	416	403	418	447	479
EC	145	136	152	161	178	195	186	196
Five largest non-EC importers								
USSR	58	74	67	73	75	76	77	49
Saudi Arabia	26	31	33	32	36	34	34	33
Japan	5	6	6	6	7	9	13	30
Colombia	2	2	2	11	11	11	11	11
USA	15	65	81	52	4	5	4	5
Exports								
World	411	438	441	430	445	478	504	552
EC	181	195	218	233	234	254	247	245
Five largest non-EC exporters								
USA	91	89	81	72	73	79	94	125
Bulgaria	69	63	62	61	72	75	72	75
India	11	16	21	9	9	10	12	13
Switzerland	13	14	11	10	10	7	12	13
USSR	2	4	2	2	2	2	2	1

Source: FAO.

(2 615), Japan (2 515), the United States (2 285), the Federal Republic of Germany (1 910), the United Kingdom (1 695), Italy (1 690), France (1 680), the USSR (1 645), the People's Republic of China (1 375 and Brazil (1 090).

Regulatory environment

There can be restrictions on the retailing side. In Greece and Italy 100% of sales are through tobacconists. Although there is no formal licensing system, all products must initially pass through tobacconists in Portugal and Spain, whilst in France, Germany, Ireland and the UK only a small part of the tobacco retail trade is handled by tobacconists.

Outlook

It should be added that the growing fears about the side-effects of smoking have led to new restrictions, such as the banning of smoking from public places (in Belgium, for example). Cigarette advertising has also been restricted, which makes it more difficult to launch new brands.

In order to promote health protection and to harmonize existing legislation on maximum 'tar' yields among Member States, a proposal for a Council Directive to establish a maximum 'tar' yield for cigarettes which can be marketed in the Member States was submitted on 4 February 1988.

The proposal stated that: '... the tar yield of cigarettes marketed in the Member States shall not be greater than 15 mg on 31 December 1992 and 12 mg on 31 December 1995'.

Of the cigarettes sold in the markets of Member States 83% will be ineligible for sale after 1995. This would change both demand and supply patterns for the tobacco industry. To alter the variety of tobacco in order to fufil Community requirements, manufacturers will have to obtain more of their tobacco leaf outside the Community. This will have major implications for tobacco growers and will worsen the trade balance.

Consumers would have a curb on their choices, and manufacturers will have to bear the costs of following the Directive's requirements, therefore increasing the price of cigarettes.

Written by DRI Europe, based on information provided by Eurostat and Pieda (Planning, Economic and Development consultants)

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