The Orkla Group

Orkla is Norway's second largest listed company in terms of market capitalisation. In 1996 the Group recorded operating revenues of NOK 26 billion and had 18,869 employees. Orkla has three core business areas: Branded Consumer Goods, Chemicals and Financial Investments. Orkla is an expertise and market-driven corporation, and its main objective is "Security and growth through profitability". Future growth and development will focus on product and market areas where Orkla's products have a good possibility of being preferred by customers and consumers. Orkla has achieved strong growth during the 1990s, especially in the other Nordic countries.

In 1996 sales outside Norway accounted for 53 per cent of the Group's total operating revenues, and 44 per cent of the employees worked in businesses outside Norway.

This is Orkla

Branded Consumer Goods

Branded Consumer Goods is the Group's largest business area, accounting for approximately 80 per cent of total operating revenues. Orkla wishes to consolidate its position as the leading supplier of branded products to Nordic households. Orkla has established itself as market leader in Norway and Sweden, and wishes to further develop its market positions and business systems in Denmark and Finland. Eastern Europe is also an important target area. Branded Consumer Goods consists of four business areas: Orkla Foods, Orkla Beverages, Orkla Brands and Orkla Media.

	1996	1995
Operating revenues (NOK million)	**20,057**	16,202
Operating profit (NOK million)	**1,514**	1,134
Operating margin (%)	**7.5**	7.0
Net renewal and environmental expenditure (NOK million)	**639**	86
Man-years	**15,174**	12,960

Chemicals

Orkla's chemicals business, Borregaard, accounts for approximately 20 per cent of the Group's total operating revenues. Borregaard is an international chemicals company with production and sales in Europe, America and Asia, and has strong global positions in selected niches of Specialty chemicals, Fine chemicals and Ingredients. Its main product groups are lignin, specialty pulp, pharmaceutical intermediates, vanillin and ingredients for animal feed and food products. Borregaard's core businesses are based on a well-defined, long-term strategy focused on developing products that are highly processed and offer possibilities for specialisation.

	1996	1995
Operating revenues (NOK million)	**5,161**	5,033
Operating profit (NOK million)	**441**	543
Operating margin (%)	**8.5**	10.8
Net renewal and environmental expenditure (NOK million)	**271**	169
Man-years	**2,547**	2,487

Financial Investments

Orkla owns one of Norway's largest equity portfolios. The Group pursues a policy of long-term investment, primarily in major Norwegian and Nordic companies. This business accounts for approximately 28 per cent of Orkla's total assets. In 1996, the Financial Investments area participated in the establishment of the Storebrand Scudder Environmental Value Fund. Financial Investments will not be discussed further in this report.

	1996	1995
Profit before tax (NOK million)	**1,099**	498
Total assets (NOK million)	**7,394**	6,569
Market value of the share portfolio (NOK million)	**11,043**	8,761
Return on the portfolio (%)	**32.5**	12.7

Orkla's Environmental Programme

Orkla endeavors to integrate product development, production, distribution and the consumption and recycling of its products within a long-term sustainable development. We consider this a basic condition for industrial activity and a prerequisite for commercial success, today and in the future.

OUR PHILOSOPHY

Orkla's environmental policy provides basic guidelines for all Orkla companies, and summarises the priorities that must govern our day-to-day activities. This policy is defined in "Goals and Values", a document which is known to all our employees as the corporate "constitution" and which emphasises that the environmental perspective is an important dimension of all our activities.

At the same time, our environmental policy determines who is responsible for setting priorities, environmental management and reporting. In keeping with our other organisational principles, Orkla has chosen to place this responsibility with the management of each business area. This principle is clear and comprehensible to all concerned. It also fits well with our financial and technical reporting systems.

OUR CHALLENGES

Orkla's various business areas have been making efforts to achieve environmental improvements for many years. In important areas, our companies have been leading the field in the development of processes, products and packaging. We are continuing this effort with full force, and regard it as an advantage that customers and consumers are concerned that our products and operations are environmentally friendly. Interest in this aspect of Orkla's activities is also increasing in the financial markets and in society at large. In sum, this means that we can achieve competitive advantages by solving environmental challenges in the fields of product development, production and distribution. In commercial terms, therefore, our financial goals and our environmental efforts complement each other in a growing number of areas.

At the same time, this is making increasing demands on our reporting systems. For a group with

Orkla's range of business areas and products, it is a challenge to develop a homogeneous system of environmental reporting for the Group as a whole. To be sure, some problems are common to all our companies, for example energy use, the use of various types of packaging, minimising waste and economising on transport. But most challenges are unique to individual business areas. Consequently, it is at this level that the problems must be defined, prioritised and solved. The purpose of our environmental report is therefore to provide an overview of the environmental challenges of the various business areas. At the same time, it gives an impression of how far they have advanced in developing adequate and relevant reporting systems.

In some cases, the Group faces problems which affect several of our business areas and raise difficult issues. The challenges associated with genetically modified raw materials and the demand for environmentally sound solutions in countries with outdated technology and serious environmental problems are just two examples. In addressing issues like these, we apply the following guidelines:

- We must base our assessments on the best professional expertise available and subject our analyses and decision-making to the most stringent quality requirements.
- We must choose solutions which bring real, lasting environmental gains.
- We cannot compromise on safety standards for either our employees or our customers.
- In principle, wherever we are in the world, we must meet the same environmental standards as in our main countries. In cases where this is clearly unrealistic, we may become involved after careful consideration, but only if our activities will help to achieve a major improvement in local environmental conditions. Local environmental demands shall always be complied with.
- We wish to promote a sincere and open attitude, engage in an active dialogue with interested parties and give the general public insight into our views and choices.

SAFETY, HEALTH AND ENVIRONMENT

In recent years, short-term sick leave in the Group has remained relatively constant at about 2 per cent. Sick leave in the Group has, however, risen. The increase from 1994 to 1995 continued in 1996. The rise in total sick leave in Norway is therefore entirely due to long-term sick leave, reflecting a national pattern. This trend has led to increased focus on local safety, health and environment activities in the Group companies.

With the exception of a small rise in 1995, in recent years there has been a steady decline in the number of injuries per million working hours (H-value). This positive trend continued in 1996. From 1 January 1997, the safety, health and environment figures also include Orkla's foreign companies.

IMPORTANT ONGOING ENVIRONMENTAL MEASURES

ORKLA FOODS

In 1996 Orkla Foods prioritised implementation of a comprehensive analysis of the dependency and impacts on the environment of all the Swedish and Norwegian businesses. The results of this analysis will serve as a guideline for determining priorities in future environmental efforts in this sector. Reference is also made to the report from Orkla Foods.

ORKLA BEVERAGES

The most important environmental objective in Orkla's beverage business is to preserve and consolidate recycling systems in our main countries. In Sweden and Norway, these systems have now expanded to handle over 99 per cent of product packaging, and are thus among the world's most efficient systems. In 1996 special efforts have been concentrated on further reducing production waste, partly because this also leads to unnecessary emissions of organic material.

ORKLA BRANDS

In June 1997 Orkla Brands will group its entire production of liquid detergents at one location. A new, modern plant has been built at Ski, outside Oslo. The environment has been a prime consideration in this project right from the start. The goal is to achieve operations which produce no emissions at all, either to air or to water. A total of approximately NOK 100 million has been invested in the new plant. It is difficult to isolate the environmental element of this kind of facility from the plant as a whole, and therefore relatively meaningless to identify a percentage of the total investment as a specific environmental investment.

ORKLA MEDIA

Orkla Media has begun work on the construction of a new joint printing plant for the Orkla Newspapers business on the west side of the Oslo Fjord, which is to replace three older printing plants. The new plant will be equipped with new, state-of-the-art technology and operations will be coordinated so as to generate environmental gains such as reduced emissions of chemical substances, better energy utilisation per printed unit, less spoilage and thereby lower consumption of newsprint than is the case with the current system of production. Similar coordination projects are being considered in other places where Orkla Newpapers has printing plants.

CHEMICALS: BORREGAARD

Borregaard, the collective name for all of Orkla's chemical businesses, has initiated or carried out several major investments projects in 1996, resulting in substantial environmental improvements.

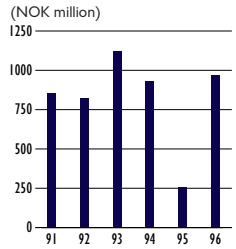
In Sarpsborg, a new processing stage in the production of specialty pulp has now been completed. Besides increasing the proportion of highly purified products, this new stage may contribute towards further reducing emissions of organic compounds. This investment totals approximately NOK 180 million. The chloralkali plant is now being converted to a mercury-free process, thereby eliminating mercury emissions. The project will be completed in 1997 at a total cost of around NOK 150 million. At the sulphuric acid factory, which supplies the business with SO_2 and thermal energy, a new SO_2 scrubber due to be completed in summer 1997 will more than halve SO_2 emissions from the factory.

EMISSIONS FROM THE GROUP'S TOTAL THERMAL ENERGY PRODUCTION IN NORWAY

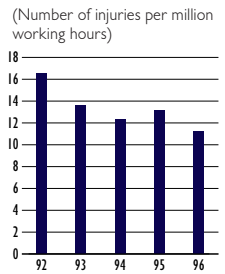
	1996	1995	1994
Thermal energy production (GWh)	**2,055**	1,771	1,636
Emissions			
CO_2			
(tonnes)	**326,030**	230,322	267,966
(grams per kWh)	**158**	130	164
SO_2			
(tonnes)	**1,446**	1,316	1,137
(grams per kWh)	**0.70**	0.74	0.69

The increase in emission of CO_2 from 1995 to 1996 is larger than the production increase. This is due to the switch from electricity to fuel oil in the thermal energy production following steep increases in short-term electricity prices.

NET RENEWAL AND ENVIRONMENTAL EXPENDITURE

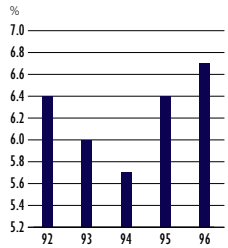


DEVELOPMENT IN H-VALUE*



* For the Group's activities in Norway

DEVELOPMENT IN SICK LEAVE*



* For the Group's activities in Norway

Orkla Foods has an extensive system of quality controls throughout the production chain, from procurement to finished product.

KEY FIGURES*

	1996	1995
Total operating revenues (NOK million)	**10,527**	7,003
Operating revenues outside Norway (NOK million)	**6,339**	3,002
Operating profit, ordinary operations (NOK million)	**608**	368
Operating margin (%)	**5.8**	5.3
Net renewal and environmental expenditure (NOK million)	**251**	190
Total man-years	**6,494**	4,378
Man-years outside Norway	**3,893**	1,805

* Included Bakers, Norway's largest producer of bakery products

Orkla Foods

Orkla Foods comprises Procordia Food, Abba Seafood, Stabburet Wholesale Products, Stabburet Fresh Meat Products and the Industry division, which comprises five companies. Orkla Foods is a leading developer, marketer and producer of frozen pizza, ready-made meals, fruit and berry-based products, sauces, preserved vegetables, seafood, processed potatoes, bakery products/cereals and refrigerated meats. Some 89 per cent of operating revenues derive from the Nordic market, where the company has 37 production plants. Orkla Foods also has its own production facilities in Austria, Estonia, Poland and Hungary. The company will gradually expand in selected international markets.

THE PRODUCTION CHAIN FROM AN ENVIRONMENTAL PERSPECTIVE

All Orkla Foods' activities affect the external environment. In co-operation with the Norwegian School of Management, Orkla Foods has carried out a comprehensive environmental impact analysis of the company's operations in Norway and Sweden, where 78 per cent of sales take place. The company considers conducting a similar study for other countries. The preliminary results show that Orkla Foods

- Utilises raw materials well
- Has increased environmental expertise at several production plants
- Has invested in environmentally sound solutions, for example by converting refrigeration plants
- Is concerned about water saving
- Largely uses one-way packaging
- Wastes little packaging in the production process
- Is good at separating waste at source
- Imposes few environment-related requirements on its suppliers

ENVIRONMENTAL DATA

Orkla Foods' businesses do not discharge dangerous chemicals to water or soil.

WATER

Orkla Foods uses large amounts of water. There is therefore a strong emphasis on measuring water consumption continuously and on water saving measures. For example, a conversion of the cooling system at the Stabburet Fresh Meats Products factory in Brumunddal, Norway has led to a significant reduction in the discharge of polluted waste water.

TRENDS IN POLLUTION LEVELS

Eighteen of thirty-seven Orkla Foods factories in the Nordic region are required by the environmental authorities to measure the level of pollution in waste water (biological/chemical oxygen demand - BOD/COD). Thanks to improvements in internal waste water purification before discharge into the public sewage system, BOD values have been considerably reduced in recent years. For the factories concerned, there was a 10 per cent decline in pollution levels in 1996.

PRODUCTION WASTE

Most organic waste, which comprises 89 per cent of total waste in Orkla Foods, is used in an environmentally sound manner. One example is Abba Seafood, where fish waste is used in the production of fish flour and the remainder is used to produce biogas. The biogas is used for bus fuel and steam production. Most of the waste from Procordia Food's production plant Eslöv, Sweden is used to produce biogas. This gas is used to heat households. There are also plans to use biogas as fuel for various types of vehicles. Organic waste from all Orkla Foods' factories is also used for animal feed.

10.7 per cent is recyclable waste, which mainly consists of cardboard, paper and plastic.

Only 0.3 per cent is hazardous waste (waste oil, batteries, fat and chemicals), which is delivered to special recycling plants.

CONSUMER PACKAGING

Orkla Foods is a major consumer of packaging materials. Higher production volumes have led to an increase in packaging consumption. The volume of packaging delivered to official collection schemes in the Nordic countries, which Orkla Foods supports, is increasing.

FOOD SAFETY

Orkla Foods gives priority to food safety according to the following guidelines:

- The precautionary principle applies
- Co-operation with official bodies and research institutions
- Quality control throughout the production chain
- Control of suppliers
- Guidelines for the use of genetically modified foods

Orkla Foods' view as regards the use of genetically modified foods is governed by the company's need to maintain its credibility and retain the confidence of the trade and consumers. It is therefore important that its products be based on safe raw materials and ingredients. For the time being, the company is adopting a restrictive, wait-and-see attitude to the use of genetically modified foods.

Orkla Foods wishes to conduct an open dialogue with its customers in this field. Orkla Foods is in favour of marking genetically modified foods. It is important that the marking be correct, meaningful and easily comprehensible.

ENVIRONMENTAL MANAGEMENT TOOLS

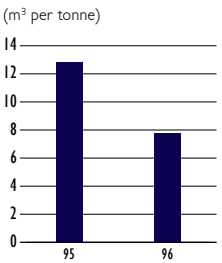
Orkla Foods' environmental impact analysis, a separate environment study for Procordia Food's Swedish businesses and a research project in which Stabburet is participating (Environmental Performance Indicators in Industry) will provide the basis for possible future environmental certification, e.g. EMAS and ISO 14 000.

FUTURE MEASURES

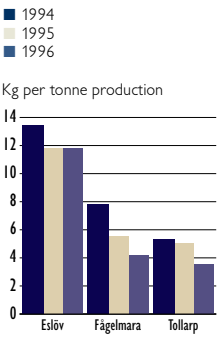
Orkla Foods will increase its focus on environmental issues. Measures will include:

- Continued openness on environmental issues
- Developing tools for analysing the effects of environmental measures
- Making greater demands on suppliers
- Focusing on energy saving
- Seeking solutions which minimise packaging consumption
- Encouraging re-use and refill solutions
- Promoting efficient packaging recycling schemes

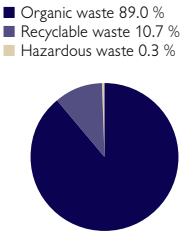
DISCHARGE OF WASTE WATER PER TONNE PRODUCTION AT STABBURET'S FRESH MEAT PRODUCTS FACTORY IN BRUMUNDDAL



EXAMPLES OF TRENDS IN THE DEGREE OF POLLUTION IN WASTE WATER (BOD)



CATEGORIES OF WASTE (ORKLA FOODS' OPERATIONS IN THE NORDIC REGION)



KEY FIGURES*

	1996	1995
Total operating revenues (NOK million)	**3,265**	3,328
Operating revenues outside Norway (NOK million)	**1,912**	1,954
Operating profit, ordinary operations (NOK million)	**300**	245
Operating margin (%)	**9.2**	7.4
Net renewal and environmental expenditure (NOK million)	**169**	(314)
Total man-years	**3,102**	3,886
Man-years outside Norway	**1,673**	2,339

* The key figures show Orkla's 45 per cent financial interest in Pripps Ringnes. The figures for 1995 also include a business in Poland which was sold in autumn 1995. In February 1997 Orkla entered into an agreement with Volvo for the acquisition of all of Pripps Ringnes.

Orkla Beverages

Returnable plastic bottles, which are unbreakable, have only about 11% of the weight of glass bottles with the same volume. Plastic bottles have now virtually replaced glass bottles as regards carbonated soft drinks and water. The reduction in weight thus achieved has contributed toward lower distribution costs. Plastic bottles have also improved the working environment by reducing production noise levels and because of their lower weight.

Pripps Ringnes is the largest player on the Swedish and Norwegian beer, carbonated soft drinks and water markets. The company has ten production plants and two smaller mineral water plants. In 1996 production totalled approximately one billion litres of beer, carbonated soft drinks and water. Through its 50 per cent interest in Baltic Beverages Holding, Pripps Ringnes has strong positions on the beer markets in the Baltic States and parts of Russia and Ukraine.

Pripps Ringnes intends to establish a coherent environmental policy in all its businesses, selecting the raw materials, processes, packaging and distribution systems which lead to overall environmental improvements.

Discharge permits are issued for individual production plants. The plants are classified as having a minor to moderate environmental impact. Pripps Ringnes makes efforts to conform to the limits stipulated in the permits, while continuously considering ways of reducing emissions. In 1996 the discharge limits have occasionally been exceeded. An additional charge has been paid for this pursuant to an agreement with the authorities.

EMISSIONS TO AIR

The effort to reduce emissions to air from the production plants focuses on a variety of areas, including:

- reducing total energy consumption
- using fuel/energy sources with high combustion value, low sulphur content and low CO_2 emissions
- systematic inspection and maintenance of boilers

The largest factories have both electrical and oil-fired boilers. The plants in Gothenburg and Helsingborg use gas for steam production. Two production plants have started using a heat

ENVIRONMENTAL DATA PRIPPS RINGNES (NORWAY AND SWEDEN)

	1996	1995
Production of beer, carbonated soft drinks and water (1000 l)	**995,221**	1,038,163
Water consumption (m^3 per 1000 l product)	**3.83**	3.91
Energy consumption - oil, gas, electricity (kWh per 1000 l product)	**314.8**	309.3
Effluents		
Water (m^3 per 1000 l product)	**2.75**	2.84
COD* (kg per 1000 l product)	**5.8**	5.8
Emissions to air*		
CO_2 (kg per 1000 l product)	**55.2**	43.4
SO_2 (kg per 1000 l product)	**0.06**	0.06
Waste to recycling (tonnes)	**12,800**	12,500

*Calculated values

pump/heat exchanger system to recycle energy from waste water. At Pripps in Gothenburg the system is so efficient that it supplies the municipal district heating network with heat equivalent to approximately 25 per cent of the total energy used by the factory to produce steam.

EMISSIONS TO WATER

The environmental challenge is mainly to reduce emissions of organic substances such as product waste, label fibres, glue and detergents.

Pripps Ringnes is currently running a project, "Environmentally sound beer production", which has already led to several improvements regarding water consumption and emissions of organic substances. Improved techology and quality assurance systems have also given positive results.

In the case of detergent emissions, washing processes are constantly being improved in order to reduce the content of environmentally adverse substances and reduce total detergent consumption.

BY-PRODUCTS AND WASTE

Efforts are being made to improve the utilisation of input factors and recycle and utilise by-products and waste. One example is the collection of yeast and sediment, which are now used in animal feed instead of being discharged with waste water. Waste is also separated at source so that much of it can be sent for recycling.

PACKAGING

In connection with packaging, most effort is focused on re-use, recycling, weight reduction and reductions in environmentally adverse substances.

In Sweden and Norway more than 99 per cent of product packaging are covered by collection systems for re-use or recycling - systems that are ranked among the most effective in the world.

The company has constantly been reducing the weight of packaging. For example, in 1996 the weight of cans was reduced by 6 per cent.

In Norway, a large number of crates for plastic bottles has been replaced by lighter trays. The trays give 50 per cent better utilization in distribution.

Heavy metals such as cadmium- and lead-based substances are no longer used in crates and trays. The number of metalized labels has been reduced. PVC is no longer used in corks and screw tops.

Life cycle analyses are now being introduced to ensure that the most environmentally sound packaging is used.

DISTRIBUTION

Pripps Ringnes' logistics and distribution systems are evaluated on a continuous basis.The purpose is to achieve the most environmentally sound choice of routes, vehicles, fuel and maintenance. Environmentally friendly diesel fuel is used in Sweden, and both countries are experimenting with the use of biodiesel and gas. In 1996, Pripps in Bromma started operating a new distribution hall which has enabled increased rail transport and reduction in the use of road transport.

BALTIC BEVERAGES HOLDING

In the companies in Eastern Europe, the main emphasis so far has been on improving product quality. The introduction of improved equipment and process routines to a certain extent fulfils the requirements for both improved product quality and reduced emissions. The working environment of the employees has also improved significantly as a result of the improvement measures that have been implemented. There will gradually be more focus on the reduction of total emissions.

PERCENTAGE RETURNED

Glass bottles[1)]	98
Returnable plastic bottles[1)]	98
Cans[2)]	95
One-way plastic bottles[2)]	77*

1) Sweden and Norway
2) Sweden
* Start 1996

The transition from traditional washing powder to micro-powder has resulted in a 42 per cent decrease in the use of chemicals and a total reduction in packaging of approximately 67 per cent.

KEY FIGURES

	1996	1995
Total operating revenues (NOK million)	**4,213**	4,229
Operating revenues outside Norway (NOK million)	**1,239**	1,353
Operating profit, ordinary operations (NOK million)	**431**	360
Operating margin (%)	**10.2**	8.5
Net renewal and environmental expenditure (NOK million)	**128**	144
Total man-years	**2,905**	3,024
Man-years outside Norway	**1,069**	1,240

Orkla Brands

Orkla Brands comprises detergents, personal products, cosmetics, household textiles, cod-liver oil, biscuits, snacks and confectionery and has factories in Norway, Sweden, Finland and Denmark. Apart from detergents, personal products and cosmetics, where sales mainly take place in Norway, Orkla Brands' domestic market comprises all the Scandinavian countries.

The purpose of establishing Orkla Brands was to create a strong joint marketing environment and achieve synergy effects in several important areas. Safety, health and environment is one such area.

As a major supplier of grocery products, Orkla Brands is committed to complying with current and future environmental standards. Orkla Brands' common goal is to ensure that its products are of the highest quality and among the most environmentally sound products in their sectors. Orkla Brands' environmental strategy is to carry out a holistic life-cycle evaluation of products from the choice of raw materials to production, packaging, distribution, use, re-use and waste.

The detergent and personal product businesses have been adapting their products to stricter environmental standards for several years. This affects both the content of products and packaging. The use of chemicals in detergents is constantly being reduced. For example, it has been calculated that the transition to concentrated detergents has led to a 42 per cent reduction in the consumption of chemicals.

On the production side, all Orkla Brands' companies are making efforts to continuously reduce emissions and waste and reduce the consumption of

environmental resources such as energy and water. One example is Nidar (confectionery), which has been working for a long time on energy economising and water recycling in the production process. This company has also been focusing on reducing production waste and has doubled the amount of cardboard and paper sent for recycling from 1995 to 1996.

More environmentally sound packaging is also a common goal for Orkla Brands. Efforts are being made to reduce packaging consumption; packaging must not contain environmentally adverse substances, it must be as small and light as possible, and it must be recyclable. The use of transport packaging has been significantly reduced.

Lilleborg (detergents, personal products and cosmetics) has been working for some time on improving packaging and has achieved good results. In the case of detergents, more concentrated products, refill packs and lightweight packaging have led to a significant reduction in the amount of packaging per unit. The transition to micro-powder has led to an approximately 67 per cent reduction in packaging volume. The goal is total conversion to micro-powder, which will mean an 86 per cent reduction in packaging in comparison with the traditional washing powder.

BISCUITS AND CONFECTIONERY

Orkla Brands is the largest supplier of biscuits on the Nordic market and has production plants in Norway, Sweden and Finland. Confectionery is produced by Nidar in Trondheim, Norway. These businesses have a minor impact on the environment and are not required to have discharge permits for emissions to air and water. Each company has its own environmental management programme which ensures continuous monitoring and improvements. This applies to quality assurance of raw materials and packaging, production emissions, energy and water consumption and waste management. Göteborgs Kex in Sweden is also focusing on products made from ecologically produced raw materials. This has been so successful that the share of these products was increased in 1996.

SNACKS

The Snacks business has production plants in Norway and Denmark. The plants are required to have official discharge permits and emissions are monitored and reported to the authorities. The Norwegian plant, KiMs Skreia, intends to introduce an environmental management system in order to ensure continuous improvements in environmental standards. In this connection, they are preparing for EMAS certification in 1997. An environmental impact study has been carried out and environmental targets have been set for 1997-98. These include reducing waste, improving utilisation and reducing emissions from purification processes and reducing the use of card-board packaging.

KiMs in Denmark has achieved more efficient energy consumption by utilizing heat from production to a district heating system which covers the annual heating needs of approximately 300 households.

DETERGENTS, PERSONAL PRODUCTS AND COSMETICS

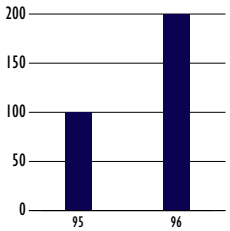
Lilleborg, which produces detergents, personal products and cosmetics, is continuing its efforts of environmental adaption of its products. The total use of chemicals in the company's products is constantly being reduced and Lilleborg is switching to substances which are as biodegradable as possible. Chemicals consumption is being reduced by producing increasingly concentrated products, and the proportion of concentrated products is rising. Another example is the transition from using LAS tensides to the more easily degradable PAS.

In 1996, boron was also phased out by replacing the bleaching agent perborate with percarbonate. Lilleborg's goal is for an increasing number of its detergents to be marked with the Nordic environmental Swan label and the company is continuing efforts to adjust its products to conform to Swan standards.

Due to the increase in the occurrence of asthma and allergies among the population, Lilleborg has in recent years introduced more products which do not contain perfume or dyes. This applies to household detergents, industrial detergents and personal products.

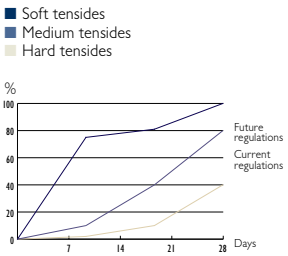
From June 1997, Lilleborg will be producing all its liquid detergents in one place. A new, modern factory is being built at Ski, just outside Oslo, where environmental considerations have been in focus from the start. The objective is to build a production plant which does not produce any emissions, either to air or water.

NIDAR
RECYCLING OF CARDBOARD AND PAPER



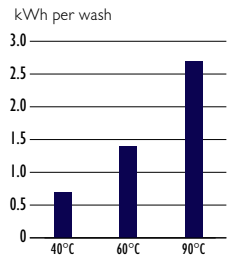
Index 1995 = 100
In 1996, Nidar doubled the amount of recycled cardboard and paper from production.

BIODEGRADABILITY OF TENSIDES (%)



On its own initiative, Lilleborg has switched to using only soft tensides.

ENERGY CONSUMPTION AND WASHING TEMPERATURE



Textile detergents have gradually been adapted to washing at lower temperatures. This is due to the different mix of textiles, more frequent washing and the desire to save energy. Lilleborg has included ingredients in its textile detergents which make it possible to achieve almost the same results at lower temperatures as were previously achieved by "boiling" (90 degree wash). Very few households now wash at 90 degrees. 60 per cent of all washing now takes place at 40 degrees and 35 per cent takes place at 60 degrees. Energy consumption is approximately halved with each reduction in temperature setting. This has led to a decline of 25 per cent in total energy consumption relating to the washing of household textiles in Norway since 1979.

KEY FIGURES

	1996	1995
Total operating revenues (NOK million)	**2,220**	1,791
Operating revenues outside Norway (NOK million)	**290**	0
Operating profit ordinary operations (NOK million)	**175**	161
Operating margin (%)	**7.9**	9.0
Net renewal and environmental expenditure (NOK million)	**91**	65
Total man-years	**2,673**	1,672
Man-years outside Norway	**802**	5

Orkla Media

Operations at Hjemmet Mortensen Trykkeri, Norway's largest magazine printing plant, were coordinated in one printing plant in 1994, thereby achieving environmental synergies such as a reduction in energy use and transport needs.

Orkla Media is an important player in the Norwegian newspaper and magazine market and in the direct marketing sector. In the past years, the business has expanded its activities in Poland. Orkla Media's Norwegian business operates in the newspaper, magazine and direct marketing sectors. Orkla Media is majority owner of 17 local Norwegian newspapers. It also owns 50 per cent of Hjemmet Mortensen, Norway's largest publisher of family and special-interest magazines and is the leading player in direct marketing in Norway through Orkla DM. In Poland Orkla Media has strategic interests in 11 newspapers.

ENVIRONMENTAL IMPACT

A life cycle analysis of printed publications shows that they affect the value-added chain throughout their life cycle from the time the paper is purchased to pre-press, printing, distribution to readers and, in the final stage, as waste. The analysis reveals that paper production accounts for 65-70 per cent of the products' overall impact on the environment.

ENVIRONMENTAL MEASURES IN ORKLA NEWSPAPERS

Orkla Newspapers is currently building a new joint printing plant on the west side of the Oslo Fjord, which will be completed in spring 1998 and will replace three older printing plants. This will enable Orkla Media to achieve environmental gains through improved technology and better coordination of activities. The joint printing plant will be equipped with modern, forward-looking technology resulting in the lowest possible emissions of chemical substances, better use of energy per printed unit and less spoilage and thereby lower consumption of newsprint than is possible with the present production process. In connection with this project, a study is also being made of the possibilities of energy recovery. When selecting the plant's location, emphasis was placed on keeping

transport requirements to a minimum and making more efficient use of return transport for both financial and environmental reasons.

In continuation of the strategy behind the establishment of the new joint printing plant, the potential for similar gains from coordinated activities is being considered in other places where Orkla Newspapers has printing plants.

The production of texts and pictures will necessarily involve the use of chemicals and liquids until the newspaper companies have fully digitalised the process. Chemicals handling and disposal are subject to stringent official controls, and the plants have an extensive system of purification and recovery which is regularly monitored.

ENVIRONMENTAL MEASURES IN HJEMMET MORTENSEN

In 1996, the publishing company moved into joint premises which have replaced five previous locations. By centralising the company's activities, environmental synergies such as reduced energy consumption and transport needs have been achieved.

Hjemmet Mortensen's printing plant operations were coordinated in 1994 into a single unit, which is Norway's largest magazine printing plant. The company regularly measures environmental indicators such as emissions to air and waste disposal.

In 1996, the company installed a recycling plant to reduce the concentration of carbon monoxide that is generated in connection with offset printing. Measurements show that these efforts have achieved very positive results. There is also a marked decline in the amount of waste in the form of photochemicals and detergents that require disposal. Efforts in the past few years to reduce the impact of noise on adjacent localities have also produced results.

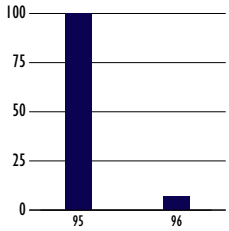
The company's total annual consumption of paper will be reduced by approximately 6 per cent as a result of a change in magazine format. All of the company's spoilage is sent to Norsk Gjenvinning for recycling. To ensure greater safety in handling chemicals, a new computer-based management system has been installed.

ENVIRONMENTAL MEASURES IN ORKLA MEDIA POLAND

Orkla Media Poland is currently involved in printing businesses in Warsaw, Bydgoszcz and Wroclaw, and is planning several new printing plants. Orkla Media applies the same environmental principles in its activities in Poland as it does in Norway. Polish legislation has increasingly been amended to conform with western standards, and new businesses are subject to stringent controls with regard to noise and emissions to air and water.

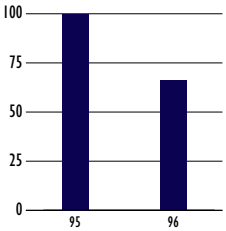
Orkla Media's printing plants are within the stipulated environmental norms, and the environmental authorities have expressed their satisfaction with the way environmental challenges are being tackled. At the magazine printing plant in Bydgoszcz, special measures are being implemented to adapt to the authorities' new carbon dioxide emissions standards. Printing plates and newspaper spoilage are recycled.

CARBON MONOXIDE CONCENTRATION OFFSET
(mg per Nm^3)



Index 1995 = 100

ENERGY CONSUMPTION (VALUE)



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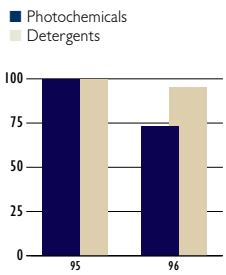
WASTE DISPOSAL



Index 1995 = 100

The graphs show figures for Hjemmet Mortensen's printing plant.

Lignin-based products have a good environmental effect in concrete since the cement content can be reduced, resulting in a corresponding reduction in CO_2 emissions from cement production.

KEY FIGURES

	1996	1995
Total operating revenues (NOK million)	**5,161**	5,033
Operating revenues outside Norway (NOK million)	**3,833**	3,753
Operating profit ordinary operations (NOK million)	**441**	543
Operating margin (%)	**8.5**	10.8
Net renewal and environmental expenditure (NOK million)	**271**	169
Total man-years	**2,547**	2,487
Man-years outside Norway	**659**	566

Borregaard

Borregaard is an international chemicals company that develops, produces and markets specialty products for industrial purposes.

Borregaard has three core business areas: Specialty Chemicals, Fine Chemicals and Ingredients. Borregaard has more than 20 production units in 11 countries and sales offices in Europe, America and Asia. In 1997 the company has over 2,700 employees on three continents.

ENVIRONMENTAL POLICY

Borregaard has long experience in the development, production and marketing of industrial specialty products for a broad range of applications. The company considers its activities to be beneficial to the society and of value to customers, employees, owners and the local community. Borregaard strives to maintain high safety, health and environment standards. To ensure that the environment-related aspects of the business are continuously improved, Borregaard is focusing on the introduction of environmental management systems. The company's ongoing efforts related to the Eco Management and Audit Scheme (EMAS) and ISO 14 000 are examples of this focus. In summer 1996, Borregaard's chloralkali plant in Sarpsborg, Norway was EMAS certified. Borregaard has also committed itself to complying with the guidelines of the international Responsible Care programme.

Borregaard is an international company. Although challenges may vary from one business or country to another, the same principles for safety, health and environment standards apply in every part of the world in which the company operates.

BORREGAARD'S ENVIRONMENTAL POLICY:

- Borregaard's ability to meet challenges regarding safety, health and environment is a key factor for the future of the company
- Borregaard will maintain high safety, health and environment standards
- Borregaard respects people and the environment
- Borregaard shall ensure compliance with relevant legislation and internal requirements. This must be verified through regular audits
- Borregaard shall have a system that ensures continuous improvements

This report explains the guidelines for and philosophy of Borregaard's safety, health and environment efforts. The most important challenges and activities in this field are described for each of the company's core business areas.

SPECIALTY CHEMICALS

BORREGAARD LIGNOTECH

Borregaard LignoTech owns production plants in the USA, China and seven countries in Europe.

The company uses lignin, the binding agent in wood, as a raw material for its products. The raw material is therefore renewable and lignin-based products are biodegradable. For its production in Norway, Borregaard LignoTech obtains its raw material from Borregaard's own pulp plant. The other production plants purchase raw material mainly from pulp mills in their vicinity.

The products are used as binding agents in animal feed and briquetting and as dispersing agents in concrete, ceramic products, agricultural chemicals, textile dyes and drilling mud.

Several of the lignin products have a favourable environmental effect when used in certain products and processes. One example is their use as additives in concrete to reduce the cement content and thereby the CO_2 emissions resulting from cement production. Lignin-based products also make it possible to reduce the amount of active substances in crop protection chemicals by spreading the substances more effectively in the solution. Lignin as a dust binding agent is an environmentally-friendly alternative to the traditional use of salt on roads.

Some of the production plants for lignin-based products have no emissions and are closed processes in which waste flows are recirculated, while waste from other plants is treated in biological purification plants.

The large number of decentralised production units reduces the need for long-distance transport of both raw materials and finished products.

BORREGAARD CHEMCELL

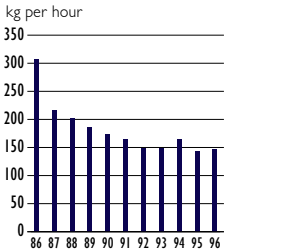
Borregaard ChemCell's production facilities are located in Sarpsborg, Norway. The plant uses some 900,000 m^3 of spruce wood per year. About 40 per cent of the wood, which comes mainly from Norway and Sweden, consists of chips from sawmill waste.

The business focuses on use of the cellulose molecule for a variety of purposes such as the manufacture of thickening agents, adhesives, paint, acetate plastic, filters and textiles. Borregaard's products are alternatives to products based on non-renewable substances.

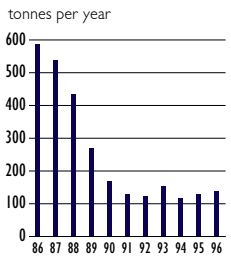
Organically dissolved compounds from pulp production are used in the production of ethanol, vanillin and lignin-based products. The final processing of the pulp takes place in the bleaching plant. The organic compounds dissolved in this process are treated in a biological purification plant that breaks down 70 per cent of the organic substances. The resin in timber contains natural toxic compounds. The Norwegian Pulp and Paper Research Institute has ascertained in biological tests that Borregaard's new treatment plant removes more than 99 per cent of the toxic compounds, completely eliminating acute toxicity. The treatment plant generates methane, which is used as a source of energy, equivalent to 3,000 tons of oil per year.

Borregaard has recently introduced a new processing stage in its pulp production that will increase the

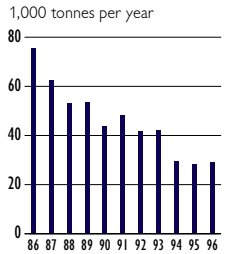
BORREGAARD SARPSBORG
EMISSIONS OF SULPHUR DIOXIDE (SO_2)



SPECIALITY PULP EMISSIONS OF ADSORBABLE ORGANIC CHLORINE COMPOUNDS (AOX)



EMISSIONS OF ORGANIC COMPOUNDS (COD) FROM SPECIALITY PULP AND LIGNIN PRODUCTION



proportion of highly purified products. The new processes may also contribute towards further reductions in emissions of oxygen-consuming organic material and adsorbable organic chlorine compounds (COD and AOX).

Borregaard manufactures its own strategic basic chemicals for pulp production. The chloralkali plant, which produces sodium hydroxide and chlorine, is now being converted to a mercury-free process, and will be completed in autumn 1997. This will put an end to all mercury emissions. In time, conversion of chlorine for sale as hydrochloric acid and sodium hypochlorite will eliminate the need to transport liquid chlorine. Mercury-contaminated construction materials and waste from the closing of the existing process will be stored in a sealed concrete unit approved by the authorities. The sulphuric acid plant supplies the pulp operations with SO_2 gas and thermal energy. A new scrubber currently under construction will be completed in summer 1997 when new permit standards will be imposed. Emissions of SO_2 from the sulphuric acid plant will then be reduced by more than 70 per cent.

During 1995 and 1996, Borregaard ChemCell transported a growing proportion of its finished products by ship. From an environmental viewpoint this is a better solution than road transport, but necessitates measures to further improve the use of the Glomma River for ship traffic.

FINE CHEMICALS

BORREGAARD SYNTHESIS

In 1996 Borregaard Synthesis had five production units in Norway, Italy and China.

In Norway, the company produces pharmaceutical intermediates and the aroma chemicals vanillin and ethyl vanillin, largely on the basis of petrochemical raw materials. However, one of the vanillin plants uses lignin as a raw material. A life cycle analysis carried out by Batelle shows that Borregaard's unique concept for the manufacture of vanillin from lignin is, on the whole, an environmentally friendly approach.

The most important challenges are linked to efforts to reduce emissions of organic compounds to the atmosphere and water, and to reduce hazardous organic waste and inorganic waste. Emissions of organic compounds are 20 per cent below the limits set by the discharge permit. Further reductions will be achieved by treating all process water at Borregaard's biological treatment plant in Sarpsborg. Treatment operations will be carried out on a trial basis in 1997 and on a continuous basis as from spring 1998. This is expected to halve the level of COD in waste water in relation to current levels. Most solvents and other chemicals are recovered in the processes. Where this is impossible, an effort is made to find alternative applications as a saleable intermediate for other products. In addition to this, the company has satisfactory arrangements for the disposal or incineration of waste at approved waste disposal sites.

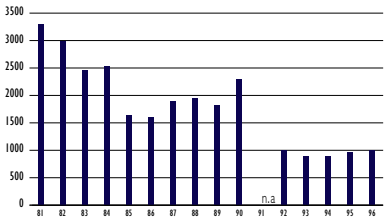
Borregaard has applied to the authorities for a 4 per cent increase in its discharge permit for copper in 1996, and an exemption has been granted by the Norwegian Pollution Control Authority. A copper recovery project has been initiated to reduce future copper emissions, and is expected to be completed in 1997. Borregaard Synthesis will establish a system in 1997 to analyse all abnormal emissions with a view to preventing such incidents in the future.

SUSTAINABLE FORESTRY

Through its industry association, Borregaard participates in a project called "Living Forest", which aims at ensuring an environmentally sound management of forests in Norway. The project focuses on documentation, building up expertise and market-related matters. The issues of forest certification and environmental criteria are also being addressed. Borregaard manages some 110,000 hectares of forest and has initiated several measures which combine efficient forest management with the protection of biological diversity and the broad use of forest areas for outdoor recreation, hunting and fishing.

DENOFA
EMISSIONS OF ORGANIC COMPOUNDS TO WATER

kg per operating day



Biological treatment plant opened during 1991

Parts of the business will switch to bulk deliveries in containers instead of smaller steel drums. This will reduce both the need for transport and the use of packing material.

In Italy, Borregaard has a diphenol plant in Ravenna and a plant for the manufacture of diphenol derivatives near Milan. At the Milan plant there is strong focus on efforts to minimise emissions of salts to water. In this connection, a process for the manufacture of certain diphenol derivatives which reduce emissions of sulphate to water has been developed and implemented. The factory has its own effluent treatment plant. In Ravenna, Borregaard's plant uses a common treatment plant belonging to the industrial estate where the plant is located.

In China, Borregaard owns a 61 per cent interest in a plant that manufactures carbofuran for crop protection purposes, using raw material provided by Borregaard's plant in Italy. The process used by Borregaard to produce carbofuran represents a marked improvement on traditional processes in terms of safety and environmental gains. Production safety measures are extremely important. Further improvement of the technical preventive systems is now in progress. The company has built its own special incineration plant for tar residuals.

INGREDIENTS

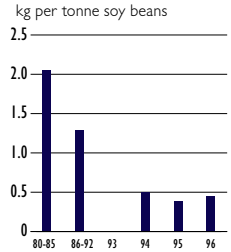
DENOFA

Denofa's production plant for oil, fats and animal feed is located in Fredrikstad, Norway. One of the most important raw materials is soybeans. In cooperation with other companies in the Orkla Group, efforts are being made to identify challenges related to gene technology. So far, Denofa has offered to its customers products which are based on non-genetically-modified beans.

Emission levels for the year have been kept within the limits set by the authorities. The biological treatment plant has been rebuilt, resulting in improved, safer management of the process and treatment procedures. Loading and discharging equipment is being rebuilt to reduce dust. Two safety analyses (HAZOP) of the production facilities in the hydrogenation plant and the hydrogen production plant were finalised during the year. As a result of this work, an action plan for the implementation of specific measures has been drawn up. A safety analysis is also being carried out in connection with emissions into the river from the tank site. As a part of the application for the discharge permit, environmental analyses of the tank site, filling station and oil refinery have been carried out.

DENOFA
HEXANE CONSUMPTION

kg per tonne soy beans



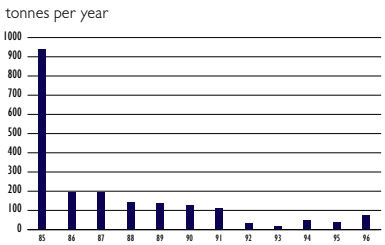
1993: Production stop

THERMAL ENERGY PRODUCTION AND EMISSIONS BORREGAARD SARPSBORG

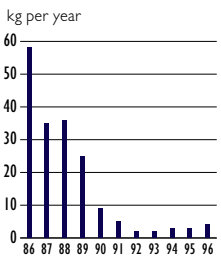
	1996	1995	1994
Thermal energy production (GWh)	**1,293**	1,207	1,129
CO_2 emissions			
(tonnes)	**212,000**	138,400	148,354
(gram per kWh)	**164**	115	131
SO_2 emissions			
(tonnes)	**1,182**	1,120	1,110
(gram per kWh)	**0.9**	0.9	0.9

Borregaard's specialty pulp can replace products based on non-renewable resources. Cellulose acetate used in spectacle frames is just one example.

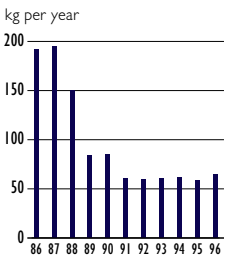
DENOFA
EMISSIONS OF SULPHUR DIOXIDE (SO_2)



CHLORALKALI PLANT
EMISSIONS OF MERCURY TO WATER



CHLORALKALI PLANT
EMISSIONS OF MERCURY TO AIR



ENERGY

Borregaard's total energy consumption in Norway in 1996 was 2.5 TWh, of which 1.8 TWh relates to its plant in Sarpsborg and includes 1.3 TWh of thermal energy.

Borregaard's consumption of electric power is partly covered by the Group's own supply of hydropower. Using electricity, which is a limited, high-quality resource, to produce thermal energy is not an efficient energy conversion. Thermal energy is produced most efficiently from other energy sources. At Borregaard in Sarpsborg, thermal energy is produced by plants which utilise the energy in oil, pyrite, bark and biogas.

The impact of energy use on the environment is mainly linked to emissions of CO_2, SO_2 and NO_x. CO_2 and SO_2 emission levels depend on fuel consumption, while the NO_x emission level is also determined to some extent by the design of the plant. NO_x has not previously been measured by Borregaard.

A considerable amount of work remains to be done to clearly demonstrate the connection between energy use and the environment. No international norms have yet been established for environmental reporting with regard to energy production, and Borregaard is still in the process of developing its own reporting system. Emissions resulting from energy production at Borregaard in Sarpsborg are shown in the table above.

Based on measurements in January 1997 and oil consumption in 1996, total NO_x emissions are estimated to be 510 tons. From 1995 to 1996 thermal energy production increased by 7.1 per cent. The increase in CO_2 emissions is higher than the increase in production, due to the switch from electric power to oil for the production of thermal energy. By international standards, the specific emission figures are low. This can be attributed to the integrated energy system at Borregaard's plant in Sarpsborg.

To strengthen its long-term supply of hydropower, Borregaard has initiated efforts to increase the energy utilisation at the Borregaard power plant in Sarpsborg and the Vafos power plant near Kragerø.

A study is being carried out for a new energy system at Borregaard in Sarpsborg. One alternative may be to use modern Cogen technology to ensure that future energy needs are met while taking due account of environmental considerations. A plant of this kind must be designed to meet thermal energy consumption needs in the long term. The CO_2 emissions from such a plant are low compared with those from other plants based on fossil fuels. The Cogen technology makes it possible to achieve a very high degree of energy efficiency because surplus thermal energy can be used to cover the local consumption needs.

MANAGEMENT TOOLS

Borregaard has an integrated management system for quality assurance and safety, health and environment factors. This system is based on the principles set out in ISO 9001 and apply to the entire organisation. Most of Borregaard's plants are certified according to ISO 9001 or 9002 standards.

Under the management system, all plants draw up annual SHE objectives based on given management parameters. In accordance with these objectives, data registration, non-conformance analyses and audits are carried out on a regular basis. Work is also in progress to expand the implementation of EMAS and ISO 14 000.

EMAS

The Eco Management and Audit Scheme (EMAS) is a voluntary scheme for environmental management adopted by the European Union. EMAS requires that a system be established to ensure control of all factors that may cause pollution.

CONTENTS

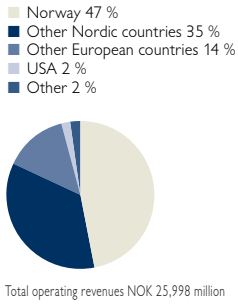
KEY GROUP FIGURES

	1996	1995
Operating revenues (NOK million)	**25,998**	21,977
Operating profit (NOK million)	**1,916**	1,784
Operating margin (%)	**7.4**	8.1
Profit for the year (NOK million)	**1,752**	1,432
Net renewal and environmental expenditure (NOK million)	**967**	256
Total assets (NOK million)	**26,496**	26,696
Total man-years	**18,277**	15,920

Orkla's Environmental Policy

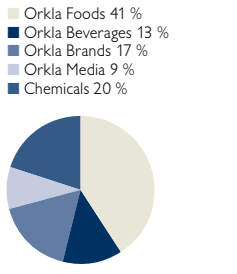
- Adverse environmental effects for which we are responsible will be reduced through genuine, forward-looking solutions.
- We strive to achieve the highest possible quality - technical and operational - in all our efforts to address environmental issues.
- Environmentally sound operations are a prerequisite for future profitable growth. Our expertise and experience must be used to manufacture products that are preferred because they combine utility and environmental benefits.
- All our activities must be based on the "cradle to cradle" principle.
- We will pursue a policy of openness and active dialogue in our environmental efforts.
- Each business area sets goals for its environmental work, establishes systems and control procedures and is responsible for implementation and reporting.

OPERATING REVENUES BY GEOGRAPHICAL AREA



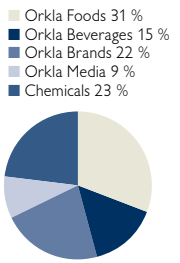
Total operating revenues NOK 25,998 million

OPERATING REVENUES BY BUSINESS AREA



Total operating revenues NOK 25,998 million

OPERATING PROFIT BY BUSINESS AREA



Operating profit NOK 1,916 million

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Environmentally sound operations are a prerequisite for future profitable growth. Our expertise and experience must be used to manufacture products which are preferred because they combine utility and environmental benefits.

Orkla

Environmental Report 1996

ORKLA