

Kikkoman Group

# Sustainability Report

## 2005



Noda Head Office

*Doing what we can for the future*

**KIKKOMAN**

## Message from the Chairman & CEO and the President & COO

After Kikkoman was established in 1917, the Rules of Conduct of Work was issued in June 1925 directed to all employees. The following is an excerpt from the Rules.

"As humans are bound to live together, it is important for us to make every effort to perfect ourselves with a belief that to be of benefit to society would be to our own benefit."

Having kept this principle, the Kikkoman Group has been making efforts to observe its environmental motto "Kikkoman will respect the working of nature and contribute to the realization of a society comfortable to live in through our corporate activities keeping harmony with the environment," in order to realize the management philosophy "to become a company whose existence is meaningful to the global society."

In order to promote living in harmony with nature, we established a division specializing in environmental preservation in 1972 (now, Environment Department). Further in 1992, we set up the General Environment Preservation Committee to oversee and coordinate the environmental preservation activities of the Kikkoman Group as a whole, and the environment preservation system has been in action to realize the environmental goals of the Group effectively.

In the field of keeping harmony with society, we established the Corporate Citizenship Center in 1997, and the Kikkoman Institute for International Food Culture in 1999 to conduct research, promote cultural and social activities, and collect and disseminate information regarding soy sauce and fermented seasonings. Our participation in the "Global Compact" promoted by the United Nations in 2001 as the first Japanese corporation was in line with the management policy to expand our operations in the world. It marked one step forward putting the company's founding principle into the international arena. In February 2005, we established the CSR Committee involving all the departments relevant to corporate management, environment and society, and we began studying ways to exercise greater social responsibility as a corporate group.

Our management efforts to pay consideration to the environment was highly appreciated and awarded by the Sustainable Management Rating Institute in 2004. This gave us greater encouragement to continue our environmental efforts.

We, in the Kikkoman Group, will continue our activities bearing in mind the consciousness of being global citizens so that we would become a corporate group that will be appreciated by people around the world. We welcome you to this website and appreciate your comments and advice.

June 2005



Yuzaburo Mogi  
Chairman & CEO  
Kikkoman Corp.



Takashi Ushiku  
President & COO  
Kikkoman Corp.

# Management Philosophy

We, Kikkoman Group, will

1. Pursue the fundamental principle being “consumers oriented,”
2. Provide high-quality products and services and promote the international exchange of food culture, and
3. Endeavor to become a company whose existence is meaningful to the global society.

## Action Guidelines

Each of us will

1. Try always to “improve” our work habits,
2. Make effective use of “time” which is given equally to all,
3. Think and act from the “consumers” standpoint,
4. Act with a consciousness of being a “global citizen,” and
5. Value “teamwork” while making the most of individual characteristics, and train younger workers.

## Environmental Motto

Kikkoman will respect the working of nature, and contribute to the realization of a society comfortable to live in through our corporate activities keeping harmony with the environment.

## Action Guidelines

(Preamble)

We act vigorously and strenuously maintaining harmony with the environment.

(Text)

1. Each of us will try to keep in harmony with the environment in performing one's own duty in all sectors, such as development, procurement, production, sales and support.
2. In addition to observing laws, we will formulate and observe the rules and regulations of our own.
3. As members of society, we will participate actively in environmental preservative activities in our local communities.
4. We will study the environment and deepen our understanding about it.
5. We will think and act from a global point of view.

# Preface to Kikkoman Group Sustainability Report

We take pleasure in presenting the Kikkoman Group Sustainability Report 2005. It is compiled in such a way as to offer information about the efforts made by Kikkoman Corporation and its seven major consolidated companies (four in Japan and three overseas) to operate in harmony with nature and the social environment in fiscal year 2004 to all stakeholders of the Kikkoman Group (customers, clients, community people, investors, environmental experts, NGOs, students and employees) in an accurate, sincere and easy-to-understand manner.

The Kikkoman Group set a goal in 2000 to reduce CO<sub>2</sub> emission to 92 percent of the level of 1990 by 2010 as one of its environmental preservation goals, which was a greater reduction than the recommended percentage in the Kyoto Protocol. Because of our efforts, this goal was achieved in 2004, and we set a new goal to reduce CO<sub>2</sub> emission to 90 percent of the 1990 level by 2010. Fortunately, these efforts were rated third among the 57 target corporations in the rating of environmental measures by major corporations conducted by the Sustainable Management Rating Institute in 2004. This Sustainability Report is intended to demonstrate our concrete management efforts and is edited in line with the Environmental Report Guidelines by the Ministry of the Environment. In February 2005, the CSR Committee was set up in order to further involve ourselves in performing our social responsibilities.

This report is released mainly on the website, and supplemented by the "Outline of Kikkoman Group Sustainability Report" which is printed in Japanese (on paper made from non-wood pulp by mixing soy sauce cake).

In addition, the Kikkoman Group Environmental Preservation Activities Case Files is also uploaded (both English and Japanese version). The Case File gives more detailed information on environmental preservation activities of the Kikkoman Group. We would be pleased if you would also look through it along with this Sustainability Report.

We welcome your comments so that we can improve the contents of the coming issue of the report.

June 2005



**Shigetaka Ishii**  
Executive Corporate Officer  
(Environment)  
Kikkoman Corporation

Note: Data in this issue are the figures of actual performance of environmental activities in 2004 of the 8 companies designated for Environmental Accounting.



## Table of Contents

Message from the Chairman & CEO and the President & COO	—
Management Philosophy and Environmental Motto	1
Preface to Kikkoman Group Sustainability Report	2
Environmental Management Topics - 2004	3
<b>Management of the Group</b>	
Composition of the Kikkoman Group	4
Outline of the Kikkoman Group	5
Kikkoman's Corporate Governance System	6
Addressing the Environment	7
<b>Living in Harmony with Nature</b>	
Kikkoman Cares for the Environment	8
Efforts to Preserve the Environment	9
Environmental Accounting	12
Activities of the Environment Department	14
Efforts to Preserve the Environment	16
Efforts for Compliance	18
Communication on Environmental Activities	20
Environment Preservation Programs of Affiliated Corporations	21
<b>Keeping Harmony with Society</b>	
Social Activities of the Kikkoman Group	28
With a Global Perspective	29
Consideration toward Customers	30
Living hand in hand with Neighboring Communities	31
Supporting Employees' Voluntarism	32
Pride in Enriching Food Culture	33
Social Programs by the Affiliated Corporations	34
<b>Reference Data</b>	
Contents of the Data / Introduction of the Corporations in the Environmental Accounting	36
History of Environment Preservation Activities of the Kikkoman Group	37
History of Social Activities of the Kikkoman Group	37
Flow of discharged materials in the manufacturing process of Soy sauce	38
Environmental Accounting Details	39
Independent Review Report and Statement of Views by a Third Party	52
For inquiry	54



# Environmental Management Topics - 2004

Major environmental activities by Kikkoman and its affiliates during the period of January 2004 and March 2005.

## The Century-Long Environment Contribution of the R&D Division

The Research and Development Division of Kikkoman Corp. celebrated its 100th anniversary in March 2004. Through its activities over the past century, notable contributions for environmental preservation have been made. They include, among others, "Second Semi-Fermented Soy Sauce Manufacturing Method," "NK Cooking Method of Soybeans," "Temperature-controlled Moromi-mash Making Method," and "industrialization of the light emitting enzyme of fireflies."



## "The Application of Luciferase" Received the Award from the Japan Society for Bioscience, Biotechnology and Agrochemistry.

The "application of Luciferase to industrial use" developed by the Research and Development Division received the Award of the Japan Society for Bioscience, Biotechnology and Agrochemistry for 2004 in March 2004. R & D works to use the light emitting mechanism of fireflies without destroying their lives and to apply it to products like a hygienic examination kit were highly evaluated. At the same time, advantages to reduce examination time and environmental effects by reducing waste from examination were widely recognized. This speedy microorganism examination method is introduced to the quality control of noodle soup and steak dipping sauce.

## Award from the Sustainable Management Rating Institute

Kikkoman was awarded by the Sustainable Management Rating Institute at the 4th annual convention of the Sustainable Management Forum of Japan held in May 2004, as a "model corporation that excels in performing socially responsible management." Among the ten award winning companies, Kikkoman was evaluated as "presenting a model to other corporations in taking excellent measures from a comprehensive and global perspective." Other winners included Toyota Motor, Tokyo Electric Power and Shiseido, etc.

## Award by the Minister of Foreign Affairs given to KII for its contribution to food culture in the United States

Kikkoman International Inc. (KII) received the award by the Minister of Foreign Affairs of Japan at the celebration of 150 years of Japan-US exchange held in June 2004 for its contributions to spread Japanese food culture among American people and to gain their understanding about it. Since its establishment in 1957, KII has been devising recipes using soy sauce and developing products to suit the palate of American people to enrich their food culture. KII's efforts were highly recognized by the Japanese government.



## Nippon Del Monte received the Award from the Environmental Conference for the Companies Related to Agriculture, Forestry and Fisheries in Japan.

Nippon Del Monte was awarded at the 30th anniversary ceremony of the Environmental Conference for the Companies related to Agriculture, Forestry and Fisheries in Japan held in June 2004. The reasons for the award were that, as a member, Del Monte has worked to strengthen the organization of the conference, promoted environmental preservation, and contributed to the sound development of businesses in the fields of agriculture, forestry and fisheries.

## Greening of Chitose Factory received the Minister of Economy, Trade and Industry Award

The Kikkoman Chitose Factory received the Minister of Economy, Trade and Industry Award for its contribution in promoting the greening of its premises at the 23rd national assembly of the Promotion of the Greening of Factories on October 1, 2004. Its efforts to maintain the plantation of factory premises while taking the natural forests and the environment of Hokkaido into consideration, and to offer a place of comfort to local people through "tour in the factory" and "offering the green area for organizing an insect photo exhibition" were highly recognized.



## Noda Head Office obtained ISO 14001 certification

The Noda Head Office obtained ISO 14001 certification, the second non-factory facility to do so, following the R & D Division. Now, preparation to obtain the certification is underway at the Tokyo Head Office and Kinki Regional Office.

## Kotohira Shrine Festival held

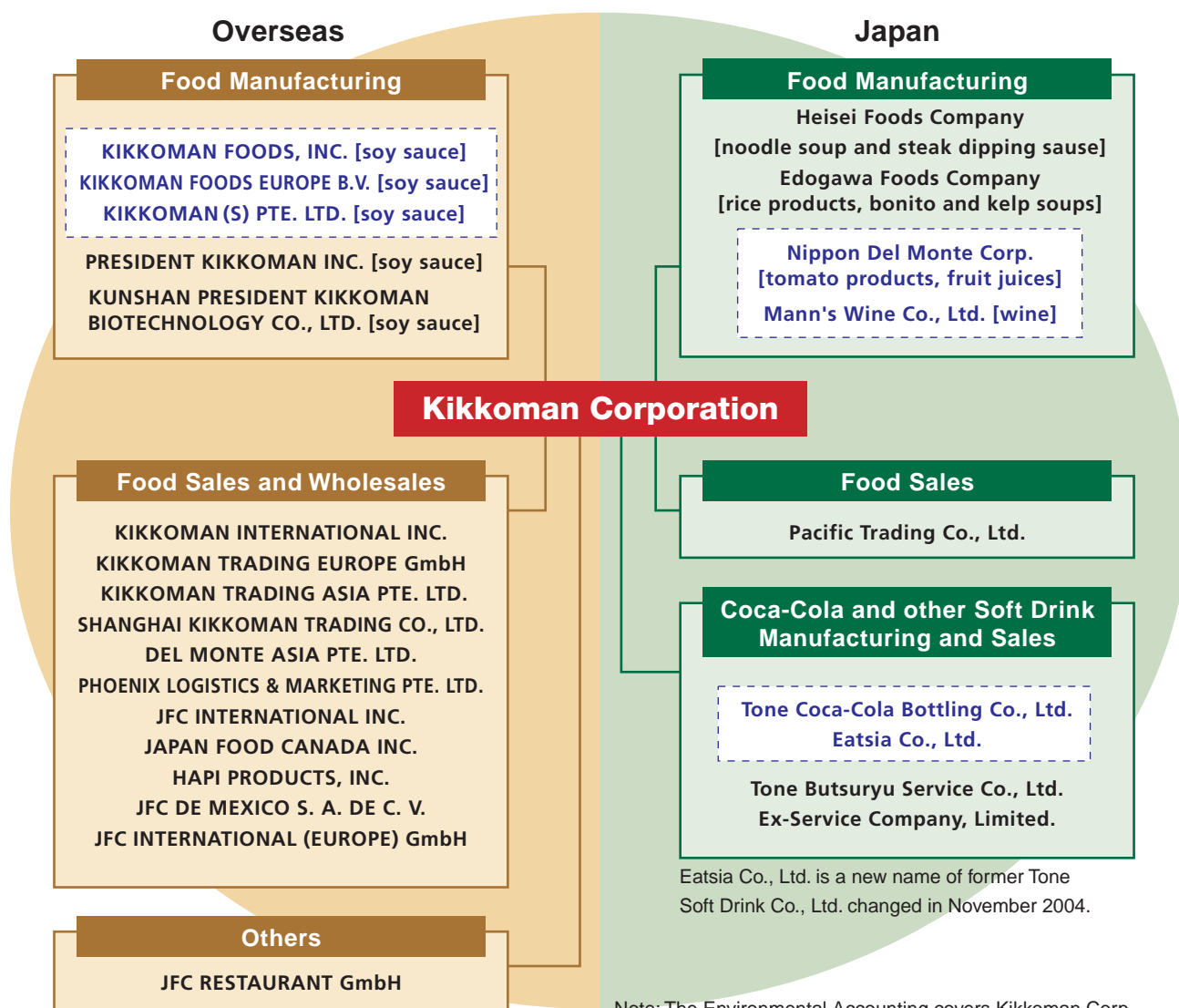
The 12th year festival was held at Kotohira Shrine within the premises of the former Kikkoman Noda Head Office in November 2004. Kotohira Shrine is a branch shrine of Kotohira head shrine in Sanuki in Shikoku that the predecessor soy sauce brewer had erected by transferring the spirit from the head shrine in the Edo period more than 200 years ago. It is placed under the control of the Association of Shinto Shrines. The first 12th year festival was held with a concept that "if you work hard for 12 years, you would have a little money saved, therefore, a festival should be held to thank community people involved and to please them with amusement." This was the beginning of the Kikkoman's traditional festival. In the festival 2004, a lot of social events were organized, such as a cooking contest, demonstrations of martial arts, performances of Japanese drumming and music, exhibitions of chrysanthemums and bonsai. Many local people enjoyed the festival. Their money offerings to the shrine and proceedings from the sales of



# Management of the Group

## Composition of the Kikkoman Group

### Operations



Note: The Environmental Accounting covers Kikkoman Corp. and 7 other companies framed by dotted lines (see p. 13).

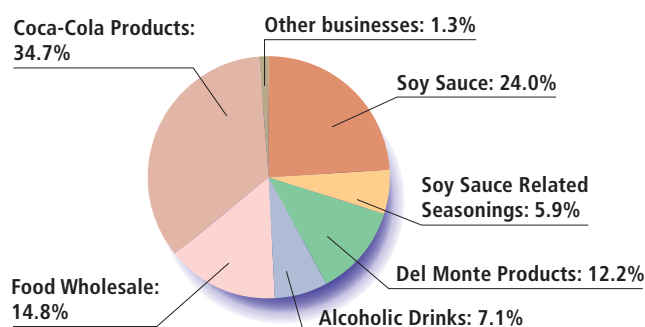
### Overseas Operations of the Kikkoman Group



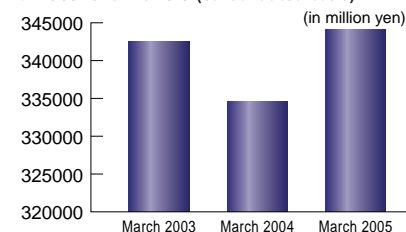
# Outline of the Kikkoman Group

## Kikkoman Group March 2005

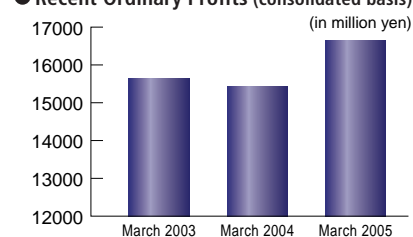
- Date of Establishment: December 7, 1917 (Kikkoman Corp.)
- Head Office: 250 Noda, Noda-shi, Chiba, Japan (Kikkoman Corp.)
- Representative: Takashi Ushiku, President & COO (Kikkoman Corp.)
- Capital: 11,599 million yen (Kikkoman Corp.)
- Turnover: 344,625 million yen (consolidated basis)
- Ordinary Profit: 16,649 million yen (consolidated basis)
- Employees: 6,350 (consolidated basis)
- Ratio of Sales by Product



### Recent Turnovers (consolidated basis)

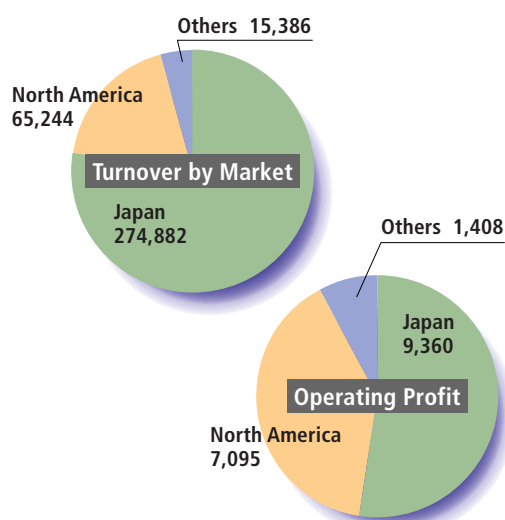


### Recent Ordinary Profits (consolidated basis)



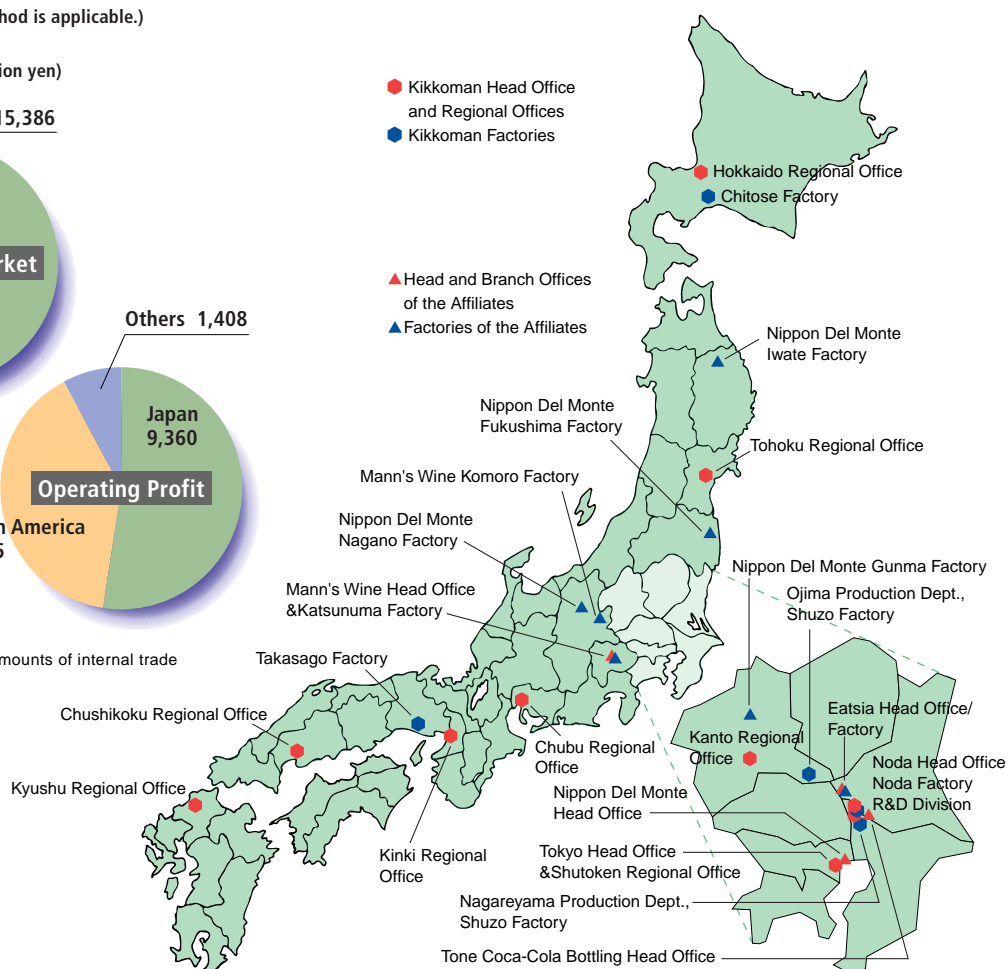
- Companies in the Group: 42 (30 parent and consolidated subsidiaries and 12 to which the equity method is applicable.)

### Outcomes by Market (in million yen)



\* Figures are before deducting the amounts of internal trade on the consolidated accounting

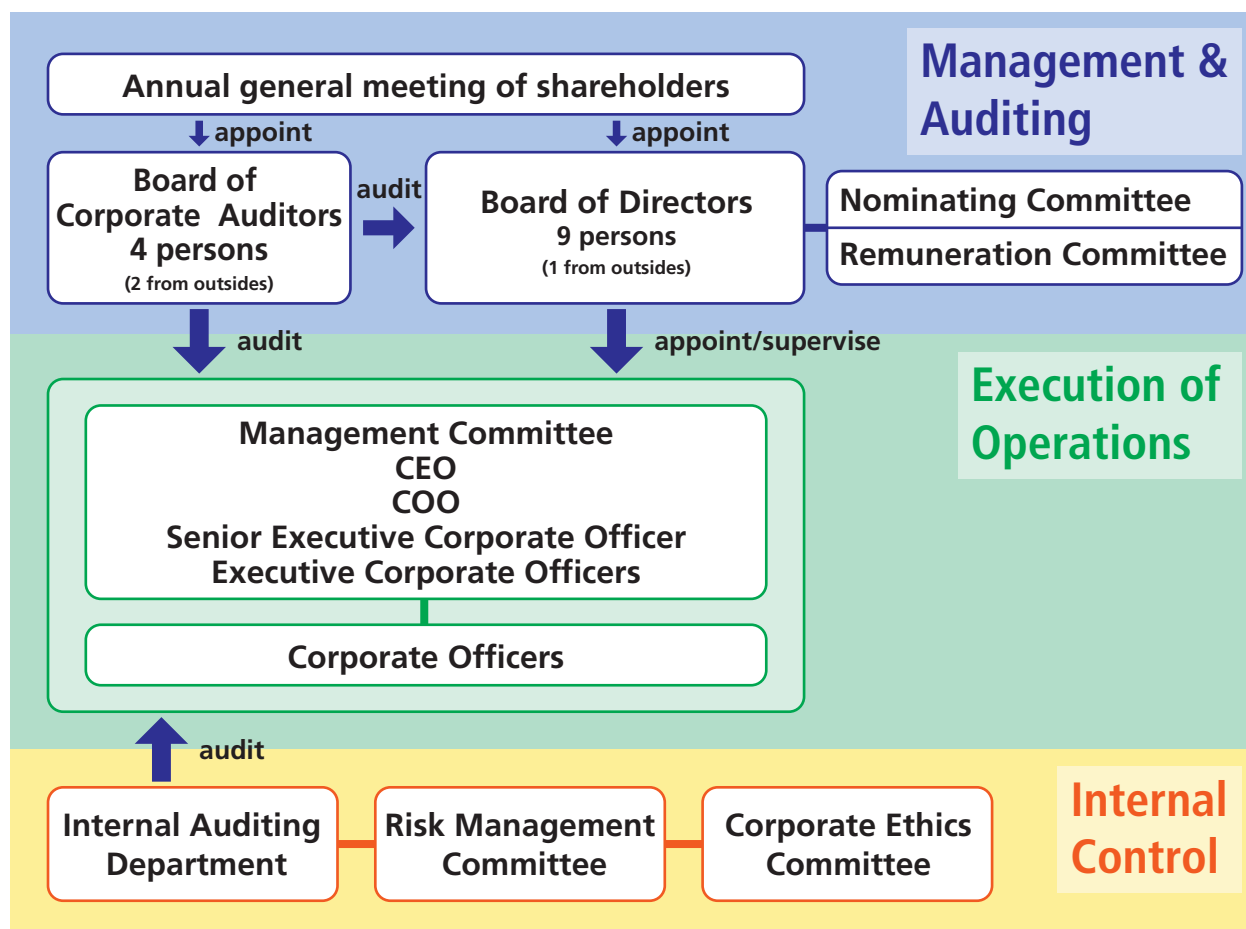
### Factories and Major Offices of the Kikkoman Group in Japan



# Kikkoman's Corporate Governance System

The Kikkoman Group is working to "enhance transparency in management," "clarify management responsibility," "expedite decision-making and implementation," "strengthen management monitoring functions," and "promote information disclosure for higher transparency" in order to consolidate the corporate governance of the entire group.

1. Two top positions have been instituted in order to define the governance and expedite managerial decision making, namely, Chairman & CEO responsible for the management of the whole Group, and President & COO for the operation of Kikkoman Corp.
2. The auditor system was introduced comprising 4 auditors, two of whom are from outside the Group to pursue increasing transparency in management in accordance with the new Law of Commerce which was put into force in May 2002.
3. Directors from outside the Group are invited to the Board of Directors whose objective and fair views are expected to help activate Kikkoman's management.
4. The functions of the Board of Directors to make decisions and oversee operations and the functions of Corporate Officers to execute operations are clearly separated within Kikkoman Corp. In addition to the above functions, the mission of the Board of Directors includes strengthening and developing the whole Group by formulating management strategies and making important decisions for the Group. The power of executing operations is transferred to Corporate Officers in order to better facilitate operations.
5. Under the Board of Directors, there are the Nominating Committee to recommend candidates for Directors, Corporate Officers and Corporate Auditors to the Board of Directors, and the Remuneration Committee to decide remunerations of Directors.
6. The Code of Conduct is instituted within the Group. To ensure the observance of the Code of Conduct, there is a Corporate Ethics Committee including a lawyer from outside, and a channel for employees to give reports has been established to promote the observance of the Code of Conduct and legal compliance.
7. The "Risk Management Committee" is established to collect risk-related information, to detect signs and take action for possible risk at an early stage, and to take swift and appropriate actions in case of emergency.
8. The Internal Auditing Department, as an internal unit, is engaged in the supervision of the legality and rationality of operations in general. The Internal Auditing Department, based on the result of auditing, gives advice and recommendations to improve operations to relevant departments.



(March 2005)



# Addressing the Environment

In order to facilitate corporate activities keeping harmony with the environment, the environment preservation system is in action to realize the environmental goals of the Group effectively. Various functions of affiliated companies in the Group are mobilized in the system.

## Environmental Preservation System

### Committees to Promote Environmental Preservation

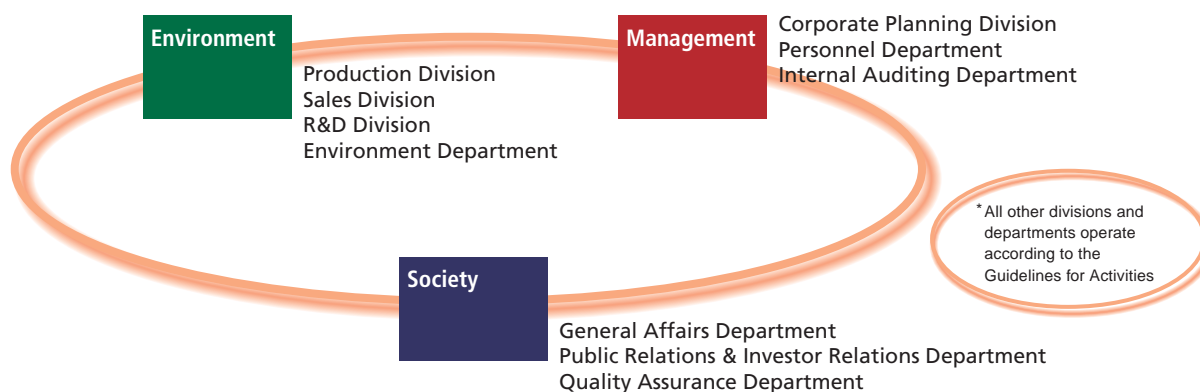
The environmental preservation activities by respective member companies of the Group are coordinated and promoted by the General Environment Preservation Committee, the supreme decision-making organ, and two Environment Preservation Committees under it.



## Corporate Social Responsibility Promotion System

### Major Departments and Divisions to Promote Management, Environmental and Social Activities (Kikkoman Corp.)

Various departments within Kikkoman Corp. are involved in the activities to promote corporate social responsibility (CSR) in order to play active roles in the betterment of society and to show the value of Kikkoman presence as global citizens.



The CSR Committee was established in February 2005, and means to increase activities in this field are being studied.

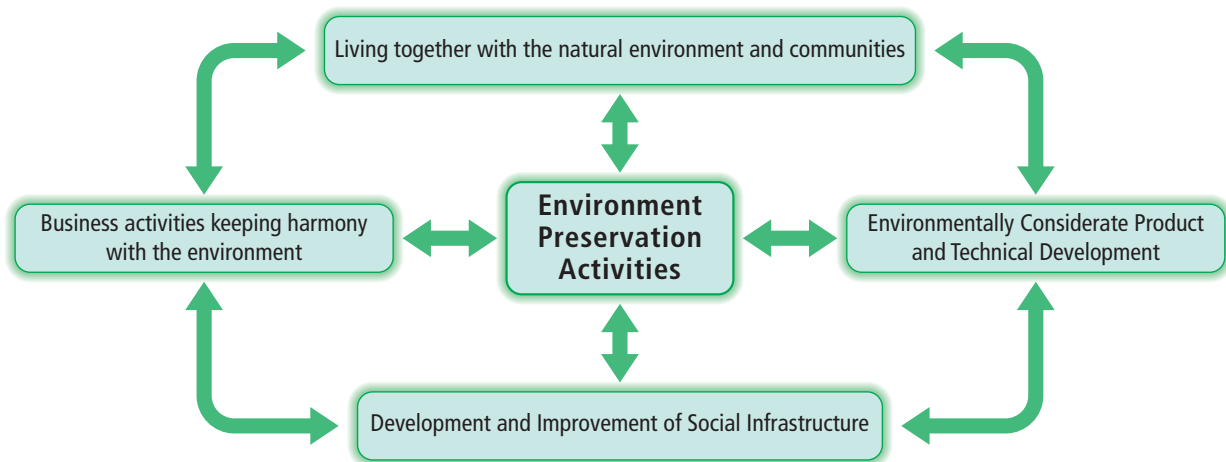
# Living in Harmony with Nature

## Kikkoman Cares for the Environment

The Kikkoman Group will respect the working of nature, and contribute to the realization of a society comfortable to live in through our corporate activities keeping harmony with the environment.

### Environment Preservation Activities

The Kikkoman Group considers that environmental preservation is the greatest challenge for humans and one of the top priorities for the management of its operations. Keeping in mind that the sustainability of corporations is deeply related to the environment, the Group aims, through keeping its business activities in harmony with the environment, to build a cyclical society that enables sustainable development.



### Mid- and Long-Term Environmental Preservation Goals

The Kikkoman Group set forth common environmental preservation goals, and has been making every effort to realize them. For 2005 and onward, these goals will be reviewed to further strengthen environmental efforts.

#### 1. Reduction of Greenhouse Gases

Reduce the total emission of CO<sub>2</sub> from the major manufacturing companies of the Group in Japan to 92% of the 1990 level by 2010. (The amount has been reduced already to 90% of the 1990 level.)

#### 2. Improvement of the Rate of Reusing Wastes and Byproducts

By fiscal year 2005, enhance the recycling and reusing rates of wastes and byproducts to

- 1) 99% at the production sectors of major manufacturing companies of the Group in Japan, and
- 2) 95% at other sectors.

(The goal has been already achieved at the production sectors of the major manufacturing companies in Japan. Efforts to enhance the rate to 100% will be continued. Other sectors will also make further efforts to increase their recycling rates.)

#### 3. Implementation of the Environmental Management System

By fiscal year 2005,

- 1) Major offices and factories in Japan will obtain ISO14001 certification, and
  - 2) Affiliated corporations will continue to disclose their environmental accounting
- (Efforts are being made to achieve these goals.)

#### 4. Promotion of the "Global Compact"

Having been the first Japanese company to participate in the Global Compact, the Kikkoman Group has been actively engaged in its activities.

(We will continue to perform our responsibility as a global citizen.)

## Efforts to Preserve the Environment

Respecting the Kyoto Protocol, the Kikkoman Group participates in international cooperation efforts to control global warming by limiting the emission of greenhouse gases.

### Mid- and Long-Term Environmental Preservation Goal 1: Reduction of Greenhouse Gases

#### Objective

1. Reduce the total emission of CO<sub>2</sub> from the major manufacturing companies\* of the Group in Japan to 92% (minus 8%) of the 1990 level by 2010.

\* Kikkoman Corp., Nippon Del Monte and Mann's Wine

The UN Framework Convention on Climate Change adopted by the UN Conference on Global Warming held in Kyoto in December 1997 (Kyoto Protocol) demands that Japan should reduce the emission of CO<sub>2</sub> and other greenhouse gases to 94% (minus 6%) of the 1990 level between 2008 and 2012. The Kikkoman Group sets forth a more severe goal itself to reduce the emission of these gases to 92% of the 1990 level by 2010.

#### Measures

- 1) Promotion of the appropriate placement of compressors and the renewal of steam traps.

The arrangement of compressors in all the factories of the Kikkoman Group will be reviewed and the existing compressors will be appropriately combined to reduce their number. Steam discharged from steam heaters will be reused.

- 2) Introduction of co-generators

Co-generators with high power efficiency will be introduced to promote effective use of heat energy, aiming at the reduction of heat sources and CO<sub>2</sub> emission. Currently, co-generators are in operation in the Kikkoman Takasago Factory and Nippon Del Monte Fukushima Factory.

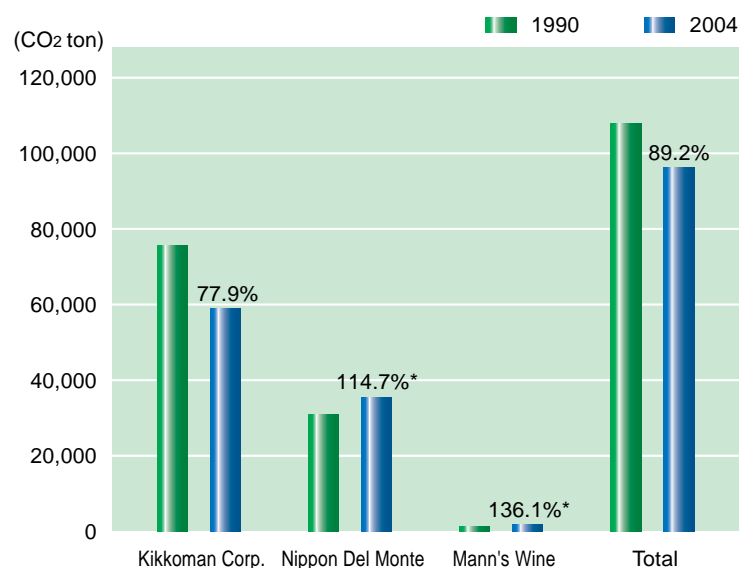
- 3) Switching to energy-saving type (inverter controlled) appliances

In order to reduce our total electric consumption, electric appliances equipped with inverter control technology and other power-saving devices, or heat collecting devices, will be chosen, when replacing the existing appliances at all offices and factories of the Kikkoman Group.

#### Current Status

The total energy use in fiscal year 2004 was 89.2% of the energy use in 1990. The objective has already been achieved, but the efforts to further reduce our energy use will be continued.

■ Comparison of energy use in CO<sub>2</sub> conversion between 2004 and 1990



< Co-generator at Takasago Factory >

\* The increase of CO<sub>2</sub> emission in Nippon Del Monte and Mann's Wine was caused by the rise of production, but the total CO<sub>2</sub> emission was not increased because of efforts made by other companies in the group.

## Efforts to Preserve the Environment

The Kikkoman Group will make efforts to recycle and reuse byproducts (soy sauce cake and oil) and wastes (plastics and used oil) from manufacturing activities.

### Mid- and Long-Term Environmental Preservation Goal 2: Improvement of the Rate of Reusing Wastes and Byproducts

#### Objective

By 2005,

1. Enhance the recycling and reusing rates of wastes and byproducts to 99% at the production sectors of major manufacturing companies\* of the Kikkoman Group in Japan.

The ultimate goal for the production sector is "Zero Emission," but 99% was selected as the objective because 100% is not realistic.

\* Kikkoman Corp., Nippon Del Monte and Mann's Wine

2. Enhance the recycling and reusing rates of wastes at offices to 95%, as some wastes can be hardly reused.

These objectives do not include construction wastages of which disposal is entrusted with external operators.

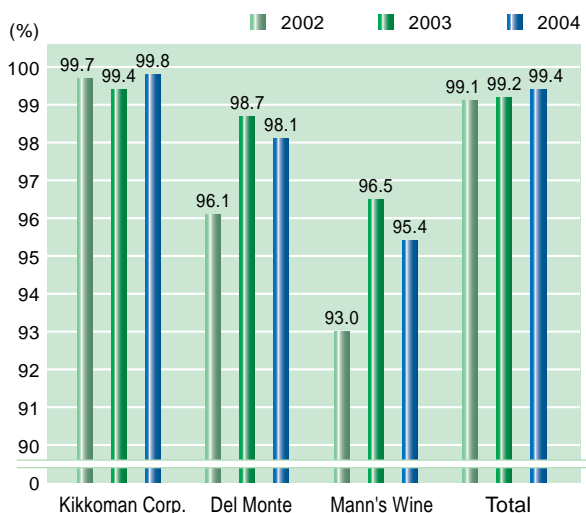
#### Measures

- 1) **Refuse:** Do not use or make what is not necessary.
- 2) **Reduce:** Save energy and raw materials, and reduce wastes (ex. packages for distribution).
- 3) **Reuse:** Use the used things and byproducts as they are (ex. use of soy sauce oil as feed, and reuse of bottles).
- 4) **Recycle:** Reuse materials in different ways (ex. PET bottles turned into synthetic fibers).

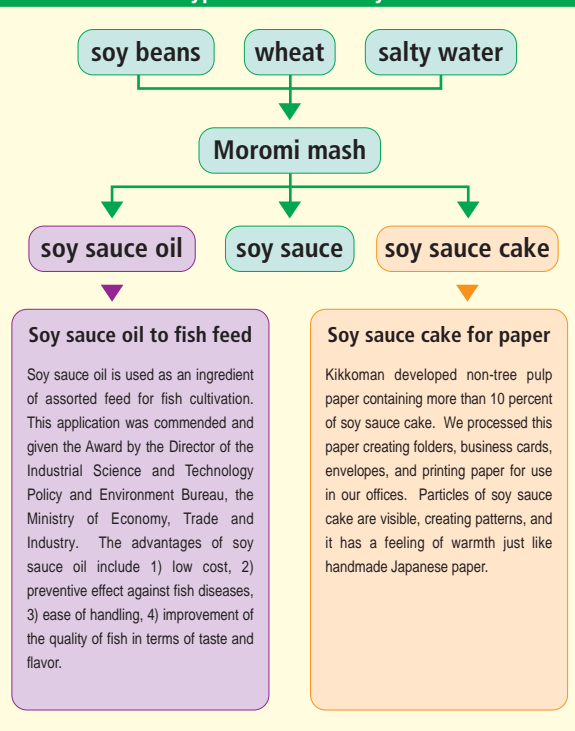
#### Current Status

The recycling rate of wastes and byproducts in 2004 is 99.4% in the Kikkoman Group, and the target percentage has been achieved. We will make further efforts to enhance the rate.

■ Wastes and Byproducts Recycling Rates  
(incl. unburnable wastes)



#### Effective Use of Byproducts from Soy Sauce Production



## Efforts to Preserve the Environment

The Kikkoman Group aims to become an environmentally considerate business group that obtains and maintains the international standards in environmental preservation (ISO14001) as well as provides the Environmental Accounting.

### Mid- and Long-Term Environmental Preservation Goal 3: Implementation of the Environmental Management System

#### Objective

**1. Major offices and factories in Japan will obtain ISO14001 certification by 2005.**

"Obtaining ISO14001 certification" will mean that by "incorporating the international standards aiming at the reduction of loads on the environment into the mechanism of management and operation processes of the organization," the organization has accommodated international environmental standards both in the system and employees' consciousness.

**2. Disclosing the Environmental Accounting of the Affiliated Corporations of the Group**

"Disclosing the Environmental Accounting" will mean to "understand the effects of reducing loads on the environment from the accounting point of view," and to "make public the efforts to efficiently manage the investment in the environment and the budget allocated to environmental preservation." It is also intended to standardize the values of the affiliated corporations toward the environmental investment and expenditure.

#### Measures

**1. Develop and enhance employee consciousness toward obtaining ISO 14001 certification.**

Kikkoman will help the employees of all the sectors to understand the importance and impact of obtaining ISO 14001 certification, and to prepare the systems to be eligible to the certification.

**2. Support the start and progress of the process to obtain ISO 14001 certification.**

Kikkoman will assist offices and factories intending to obtain ISO14001 certification through education and consultation.

**3. Standardize the Environmental Accounting standards and publish the Environmental Accounting in the Sustainability Report**

Kikkoman will standardize Accounting Standards based on the Environmental Accounting Guidelines by the Ministry of the Environment and share them with all the affiliated corporations. Data will be calculated in accordance with the fiscal years of respective corporations.

#### Current Status

**1. Obtaining ISO 14001 Certification**

● Offices and factories that have already obtained certification

1997	May	Noda Plant
1998	Apr.	Takasago Factory
1999	Apr.	NDM Fukushima Factory
	Jun.	Chitose Factory
	Nov.	Noda Factory (Noda/Nakane Area)
2000	May	NDM Gumma Factory
	Aug.	Mann's Wine
	Nov.	Shuzo Factory (Ojima)
2001	Mar.	Tone Coca-Cola Bottling
	Jul.	NDM Nagano Factory
	Oct.	Noda Factory (Nakanodai Area)
2002	Jun.	KFI-WI
	Aug.	KFE
	Oct.	KSP
	Dec.	Edogawa Plant
2003	Mar.	Shuzo Factory (extended)
	Mar.	KFI-CA
2004	Apr.	R & D Division
	Oct.	Noda Head Office
2005	Apr.	Nippon Del Monte Corp.
	May	Tokyo Head Office

● Office preparing to obtain ISO 14001 Certification

Kinki Regional Office (expected in March 2006)

**2. Environmental Accounting**

Kikkoman has been publishing its Environmental Accounting since 2000 (see p.12-13)



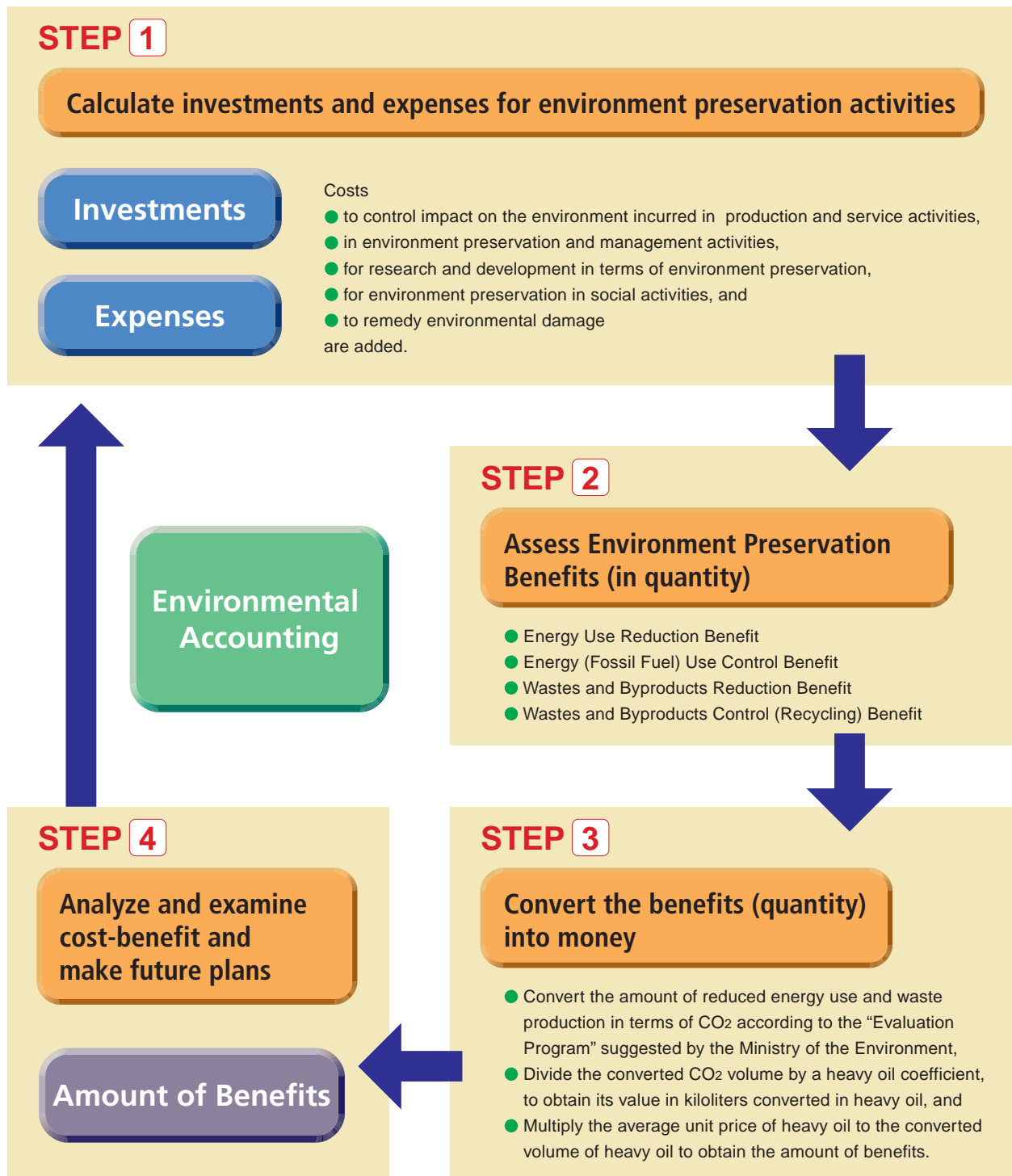
< Noda Plant >

Noda Plant obtained ISO 14001 certification in May 1997, as the first one to obtain ISO14001 among the Food Industry in Japan.



## Environmental Accounting

The Kikkoman Group has been publishing the Environmental Accounting of the Group since 2001 (Kikkoman Corp., since 2000) calculated in accordance with the Environmental Accounting Guidelines provided by the Ministry of the Environment. Through calculating Environmental Accounting, costs and benefits in relation to environment preservation can be made clear. As a result, it is expected that more efficient management and a stronger corporate culture can be facilitated, and that new sources of profit can be found.



## Environmental Accounting (FY 2004)

The amounts of investment and expenditure that the Kikkoman Group spent during fiscal year 2004 as well as the effect by environmental preservation activities (in moneys) will be disclosed (see Annex on p.39 for details).

### Corporations and periods covered in the Environmental Accounting

April 2004-March 2005	January-December 2004
Kikkoman Corp.	Tone Coca-Cola Bottling Co., Ltd.,
Nippon Del Monte Corp.	Eatsia Co., Ltd.
Mann's Wine Co., Ltd.	Kikkoman Foods, Inc. (KFI)
	Kikkoman (S) Pte. Ltd. (KSP)
	Kikkoman Foods Europe B.V. (KFE)

### Investment and Expenditure for Environment Preservation

Investment and expenditure for 2004 are calculated according to the Guidelines published by the Ministry of the Environment.

#### ● Investment and expenditure

(in million yen)

Classification by the Ministry of the Environment	Investment	Expense
1) Business Area Cost	973	2,687
2) Upstream/Downstream Cost	0	577
3) Administration Cost	2	361
4) R & D Cost	6	191
5) Social Activities Cost	0	25
6) Environmental Remediation Cost	0	0
Total	981	3,841

### Objective

#### ● Environment Preservation Benefit

(in million yen)

	Benefit
Energy use reduction	-15
Energy (fossil fuel) use control	187
Wastes and byproducts reduction	19
Wastes and byproducts control (recycling)	839
Total	1,030

## Activities of the Environment Department

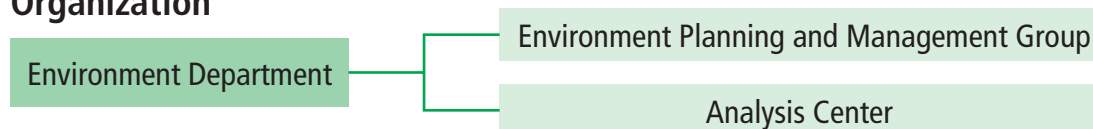
The Environment Department first began to deal with wastes and discharges more than 30 years ago. During this period, the roles of the department have changed dramatically. While the prime purpose of its work is to preserve the environment of operation bases and neighboring communities, the progress of the information age and globalization has affected causing them to expand the environmental activities of the Kikkoman Group. The Environment Department aims to increase its contribution to environmental preservation and to promote its sound business activities, thus to enhance the corporate image of the Kikkoman Group in the world.

### History of the Environment Department

Year/Month	Environment Department
1972 Dec.	<b>Environmental Management Department was established.</b>
1976 Oct.	<b>Environmental Analysis Center was established.</b>
Oct.	Environmental measurement and certification service in density was registered.
Nov.	Environmental measurement and certification service in noise level was registered.
1992 Mar.	<b>Environmental Protection Division (Environmental Protection Planning Department &amp; Environmental Analysis Center) (from Pollution Prevention to Environment Protection)</b>
Apr.	<b>General Environmental Protection Committee was founded.</b>
Jul.	Quality inspection service of Tap water in buildings was registered.
Oct.	Environmental Charter was formulated and promulgated.
1993 Mar.	Voluntary Plan was formulated.
Sep.	Gaschromatograph-mass spectrometric detector was introduced.
1994 Mar.	Environmental measurement and certification service in vibration level was registered.
1995 Mar.	<b>Division was reorganized to Environmental Protection Promotion Division (Environmental Preservation Planning Department and Environmental Analysis Center)</b>
Jun.	Internal Environmental Auditing began (at 14 places including production and research sectors and the hospital)
1996 Aug.	<b>Process of obtaining ISO 14001 certification was initiated.</b>
1997 Jan.	Environmental measurement and certification software began to be used.
1998 Oct.	Kikkoman received "Environmental and Resource Cooperation Award" by the Nihon Shokuryo Shinbun (the Japan Food Journal).
Nov.	Annual Environment Report was disclosed on the Internet.
1999 May	<b>Environmental Management Dept. was set up within the Environmental Protection Promotion Division.</b>
Aug.	<b>Environmental Management Div. was reorganized (Environmental Planning Dept., Managing Dept., Environmental Analysis Center).</b>
	<b>General Environmental Preservation Committee was established.</b>
2000 Feb.	<b>Goals to reduce emission of greenhouse gas and to recycle and reuse wastes were determined and published.</b>
Jul.	Annual Environmental Report of Kikkoman Corp. including Environmental Accounting and an independent review report was disclosed on the Internet.
2001 Jul.	Annual Environmental Report of the Kikkoman Group was disclosed on the Internet.
Nov.	Award by the Minister of Agriculture, Forestry and Fisheries was given in the Resources and Environment Preservation category.
2002 Jun.	<b>Environmental Protection Promotion Div. was reorganized as Environment Department (Environment Planning &amp; Management Group, Analysis Center)</b>
2003 Feb.	Kikkoman was elected as a "Green Top Runner" by the Sustainable Management Rating Institute
2004 May	Kikkoman received the Award from the Sustainable Management Rating Institute
Jun.	Sustainability Report of the Kikkoman Group was disclosed on the Internet and its summary was published.
Aug.	Analysis Center began providing analysis services of residual agricultural chemicals

## Activities of the Environment Department

### Organization



With the aims of protecting and conveying beautiful nature and a rich living environment to coming generations, the Environment Department plans and promotes environmental activities for the Kikkoman Group, and gives guidance and support to environmental activities conducted at every sector.

### Environment Planning and Management Group

In order to achieve the Environmental Motto, the Group works with the purposes of "planning and supporting the Kikkoman Group's manufacturing and business operations keeping harmony with the environment," "supporting the development of environmentally considerate products and technologies," and "keeping harmony with the environment, and promoting the life and development of local communities." In practice, the Group:

- plans, promotes and supports the environmental activities of the Kikkoman Group,
- plans and implements internal environmental auditing, and supports the efforts of different corporations, branches and factories to obtain ISO 14001 (environmental management system) certification, and
- plans environmental educational activities and supports social activities by various departments.

### Analysis Center

As a group of experts in environmental analysis and measurement, the Analysis Center supports and promotes the environmental preservation activities of the Kikkoman Group. As a registered institution authorized to certify environmental measurements, the Center aims to contribute to the environmental preservation of local communities through its services of analyzing the atmosphere, water quality, soil, industrial waste, noise, vibrations, odors, drinking water, agricultural chemicals and other items. In practice, the Center:

- examines and analyzes samples commissioned by departments inside and outside the Kikkoman Group, and
- provides the clients with reports, as a means to help them with their environmental preservation activities.

### Analysis of Residual Agricultural Chemicals in Food Articles

Beginning in May 2006, the revised Food Sanitation Law will be enforced, which will require greater control and restriction of residual agricultural chemicals in food articles with a positive list system. It means that the number of chemicals to be controlled will increase greatly, and that, at the same time, an effective and reliable method is urgently required to analyze different agricultural chemicals simultaneously.

The Analysis Center has established a highly accurate method to analyze different agricultural chemicals simultaneously using the most of its highly accurate technique of analyzing minute quantities of ingredients of soy sauce, and its state-of-the-art analyzers. Thus, the Center has opened up a new path to contribute to environmental preservation and safety in food.

### Capacity of Agricultural Chemicals Analysis

The Center's current capacity is to analyze the presence of 87 kinds of agricultural chemicals including insecticides, bactericides and herbicides. In the future, the Center will increase its capacity to be able to analyze 150 kinds of agricultural chemicals.

### Target Food Articles

Almost all kinds of food including soy sauce, grains, beans, vegetables, fruits, liquors and health supplements.



GC/MS/MS apparatus

### Analysis of Effective Components of Soy Sauce Cake

Soy sauce cake has long been used as a safe feed for livestock in general. The Environment Department analyzed the basic components and found effective components contained in soy sauce cake to promote the use of soy sauce byproduct. The following findings are made:

- 1) It contains a lot of isoflavones which have antioxidant activities and which act similarly to female hormones in an easy-to-absorb form.
- 2) It contains highly lipophilic antioxidant Vitamin E in a large quantity (4 times more than other sources), and it helps prevent the oxidization of feed. It also contains Vitamin K<sub>1</sub> which is indispensable for coagulation of blood.
- 3) It contains much fat as its basic component. Therefore, feed made of soy sauce cake has rich energy content. As 80 percent of crude ash, another component in a large amount, is salt, it is useful to as a supplement to salt.



"Fresh Meal," a feed made of soy sauce cake

### Efforts to Preserve the Environment (Environmental Preservation Activities)

With a belief in nature as the base of our operations, the Kikkoman Group is making efforts in a wide range of our activities to respect nature and to live in harmony with nature.

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#### Century-Long Environmental Contribution by the Research and Development Division

The Research and Development Division of Kikkoman Corp. has been carrying on the work of its predecessor, Brewing Laboratory, Noda Shoyu Brewers' Association which was established in March 1904. This is the first such laboratory in Japan as it was established earlier than the National Research Institute of Brewing. Through its activities over the past century, notable contributions for environmental preservation have been made. They include:

- Enhancement of rates of using raw materials through technical development such as "First Semi-Fermented Soy Sauce Manufacturing Method," and "Second Semi-Fermented Soy Sauce Manufacturing Method" (to which the Purple Ribbon Medal was awarded by the government).
- Enhancement of the rates of liquefying and using protein through technical development such as the "NK Cooking Method of Soybeans" (to which the Invention Award by the Prime Minister was given.)
- Reduction of the fermenting period through technical development such as a "Temperature-controlled Moromi-mash Making Method" leading to energy saving.
- Effective use of byproducts from processing agricultural products such as the development of proanthocyanidins from grape seeds (to which Award for Technological Research by the Japan Society for Bioscience, Biotechnology and Agrochemistry was given).
- Effective use of containers and packaging materials by developing a soy sauce dispenser.
- Promotion of nature preservation through technical development such as the industrialization of the light emitting enzyme of fireflies (to which the Award by the Director General of the Scientific Technology Agency was given).

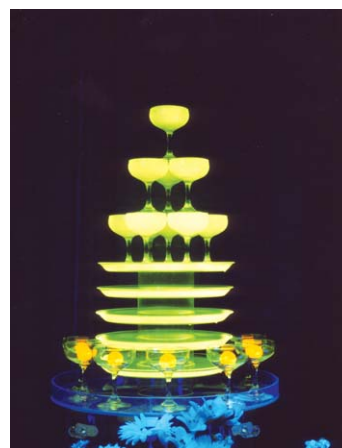


Research and Development Division

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#### "The Application of Luciferase" Received the Award from the Japan Society for Bioscience, Biotechnology and Agrochemistry.

The "application of Luciferase to industrial use" developed by the Research and Development Division received the Award of the Japan Society for Bioscience, Biotechnology and Agrochemistry for 2004. R & D works to use the light emitting mechanism of fireflies without destroying their lives and to apply it to products like a hygienic examination kit were highly evaluated. At the same time, advantages to reduce examination time and environmental effects by reducing waste from examination were widely recognized.



An entertainment tool applying light emitting enzyme

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#### Introduction of a Speedy Microorganism Examination Method

For both noodle soup and steak dipping sauce, quality assurance is required to ensure that absolutely no microorganism including general bacteria is present. The traditional examination process involving "culturing, colonizing and counting" takes nearly one week to get a test result. Hence, products had to remain in the storehouse for a week before shipment. The R & D Division discovered that by applying "ATP Method" that used the light emitting mechanism of Luciferase when reacting with ATP, the test period could be shortened to 2 days. The Production Division developed a "Speedy Microorganism Examination Method" adopting the ATP Method, and began to use it for actual quality control. As a result, the test period has been shortened, and it is now possible to keep appropriate quantities of products in stock to meet market demand.



## Efforts to Preserve the Environment (Cases)

### Greening of Chitose Factory received the Minister of Economy, Trade and Industry Award as a good model of the greening of factory

The Kikkoman Chitose Factory received the Minister of Economy, Trade and Industry Award for its contribution in promoting the greening of its premises at the 23rd national assembly of the Promotion of the Greening of Factories on October 1, 2004. Its efforts to maintain the plantation of factory premises while taking the natural forests and the environment of Hokkaido into consideration, and to offer a place of comfort to local people through "tour in the factory" and "offering the green area for organizing an insect photo exhibition" were highly recognized. The policy and practices of the Chitose Factory are in line with the policy of the Chitose city government to build a city where "people are environmentally considerate and filled with happy feelings, and where they interact lively."



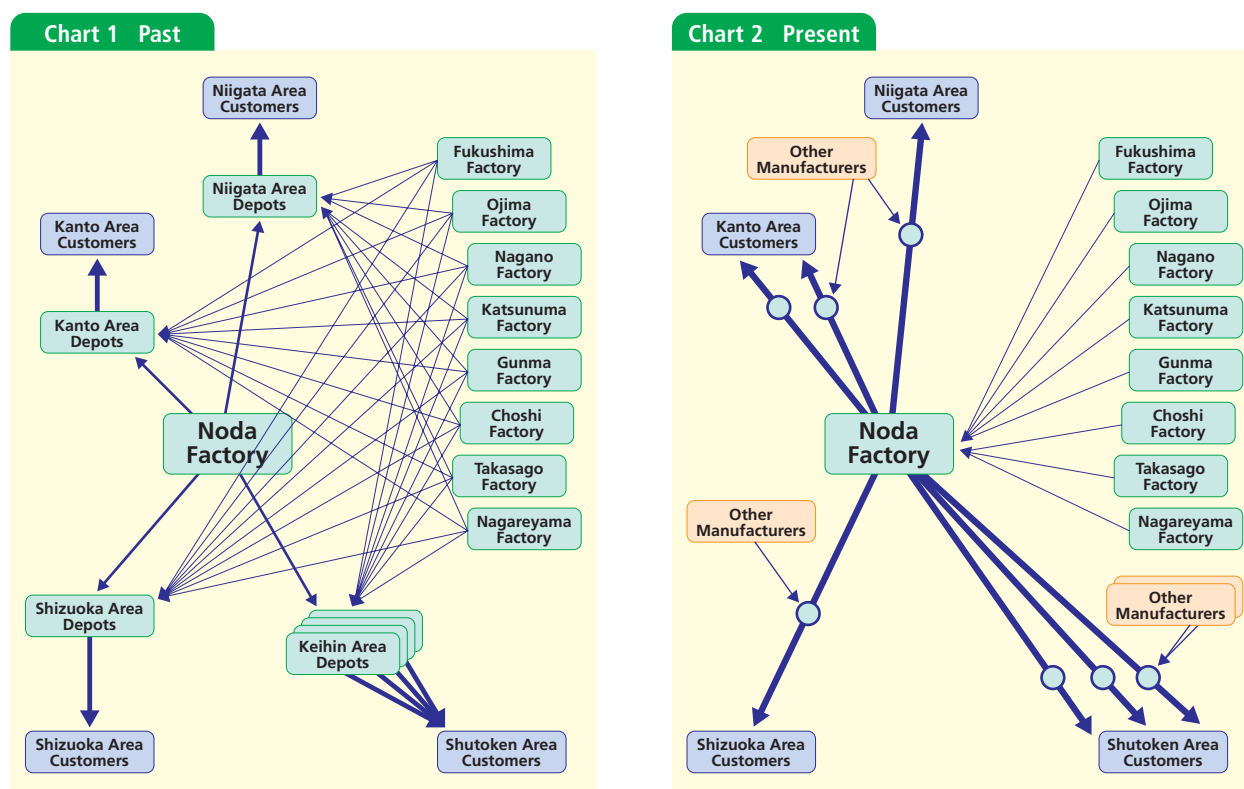
### Expanded use of TEMP Eco-Caps

Kikkoman has been promoting the use of a tamper-proof TEMP Eco-Cap that can be easily removed from a PET bottle for the sake of separated disposal after use. Due to various reasons, this type of cap has not been applied to a portion of packages requiring thermal resistance. Thanks to the improvement in a filling technique, and its reliability ascertainment test, the TEMP cap began to be applied to PET bottles for low-salt soy sauce and noodle soup products in 2004.



### Improved Distribution System

Kikkoman reorganized its distribution system from the past system when products were transported to depot warehouses from each factory to one with three Distribution Centers (Noda, Takasago and Chitose) and two Depot Warehouses (Sendai and Fukuoka). With this, flow lines were simplified and distribution work was rationalized. It helped, as a result, to promote commissioning transportation to outside transportation companies, abolishing company-owned warehouses, and reducing stockpile, leading to greater cost reduction and better cash flow. At the same time, the traffic of trucks has been reduced with a resultant decrease in environmental pollution. The figure shows the flow lines centering on the Noda Factory Distribution Center.



### Efforts for Compliance (cases)

Besides observing laws and regulations, the Kikkoman Group establishes voluntary restrictions and makes efforts to prevent the occurrences of illegal actions, to remove their causes, and to maintain justice and morality in the light of social commonsense.

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## Prevention of Environmental Pollution

### 1) Analysis Center

The Analysis Center has been registered with the Chiba prefectural government as an institute capable of conducting environmental measurements and issue certificates, and to conduct drinking water quality inspection for buildings. With experts and various analyzers, the Analysis Center inside Kikkoman Corp. is providing surveys and analyses as a means to observe various environmental pollution standards.

### 2) Water Pollution Prevention

The Kikkoman Group is paying attention to the maintenance of water quality and prevention of water pollution, as water is an essential part of its operations. In addition to the strict observation of density restrictions and gross quantity restrictions of water pollutants, the Group is endeavoring to observe the Group's strict self-imposed restrictions. Automatic water analyzers were installed at all manufacturing sites to process wastewater from their production facilities in accordance to the provided level to discharge it into public sewerages or rivers. Kikkoman Corp. has cleared the new permissible levels of nitrogen and phosphor discharges (less than a quarter of the past restrictions) under the measures for the prevention of contaminated water and eutrophication of waters enforced by the Chiba prefectural government in April 2004.

### 3) Air Pollution

In addition to observing governmental restrictions of density and the total amount of SOx, NOx and Soot and Dust emission, the Kikkoman Group is controlling these pollutants with self-imposed restrictions. In practice, for SOx reduction, heavy oil with low sulphur content is used, for NOx reduction, heavy oil with low nitrogen content as well as low NOx burners and low NOx small boilers are used, and for soot and dust control, fuel is totally shifted to heavy oil-A. At the time when photochemical smog has been generated, the total amount of fuel use is immediately reduced. There is no facility that generates dioxin.

### 4) Noise and Vibration

Measures such as improving equipment and installing soundproof and sound absorbing walls have been made. The levels of noise and vibration are regularly monitored within the borders of factories to ensure they are restricted under the designated levels. When necessary, communication with neighboring people is promoted.

### 5) Chemical substance control (PRTR Law)

The Pollutant Release and Transfer Register Law enforced in 2000 does not apply to the Kikkoman Group. Even though small amounts of chemical substances are used for research, experiment and analysis, the Committee of Reagent Management and other relevant units control their use and disposal.

### 6) Environmental Hormones

A special committee was established on environmental hormones to monitor packages and product quality.

Incinerators have been totally abolished. It is found that there is no dioxin emission through surveys at different places.

### 7) Odor Prevention

Measurement and control of specific odiferous substances are conducted in accordance with the enforcement regulations of the Offensive Odor Control Law. In addition, licensed smell examiners within the corporations monitor smells in operation sites.

### 8) Soil Pollution

The soil in the related compounds was inspected, and there was nothing illegal found.

### 9) Black (black mold) Pollution

The trees, roofs and walls of houses within 100-200 meter radius from a brewing factory may get dark because of *Aureo basidium*, a kind of bacteria generating a black pigment that attaches itself to material surfaces and grows there. This species is a common bacteria existing universally in the air, and it has no pathogenic nature. The black mold can be washed away with water, or, sometime, water with a small amount of detergent. Even so, Kikkoman applies hermetically closed systems at the source, installs water washing devices to air ducts, and recovers alcohol content from discharged gases, and employees visit neighbors regularly to ask their comments and requests, and when necessary steps are taken to solve problems.

### 10) Greening

Each factory concludes, when necessary, a Greening Agreement with the local government of its location in an effort to maintain greenery inside and outside the factory. So far, the President's Award by the Japan Greenery Research and Development Center, and the Director's Award from the Hokkaido Regional Officer of the Ministry of International Trade and Industry have been awarded. In October 2004, the Kikkoman Chitose Factory received the Minister of Economy, Trade and Industry Award.

### 11) Automobile NOx (nitrogen oxides) and PM (particulate matter) Control Law and Restriction of Diesel Vehicles

The Group observes laws and regulations restricting the types of vehicles used for operations aimed at the reduction of NOx and PM emissions. In order to gain the cooperation of supply companies and other related companies in observing these restrictions, the Group sends the "Request for the restriction of diesel vehicles by the Chiba prefecture" and "Request for cooperation to stop idling while visiting our company for delivery" to all related companies.

### 12) Energy Saving Efforts

To make more effective use of resources and to slow global warming, each factory has set its target and is making effort to reduce energy use (see p. 9).

## Efforts for Compliance (cases)

### Industrial Waste Disposal

#### 1) Industrial Waste

Industrial wastes are sorted according to their raw materials, and are placed for reuse as much as possible, and efforts to reduce the total volume of wastes are made. Treatment of final industrial waste is entrusted to licensed collectors, transporters and disposal dealers whose qualifications and working sites are regularly ascertained by Kikkoman. Kikkoman also issues and keeps a copy of its manifest and receives report.

#### 2) Disposal Equipment and Facility

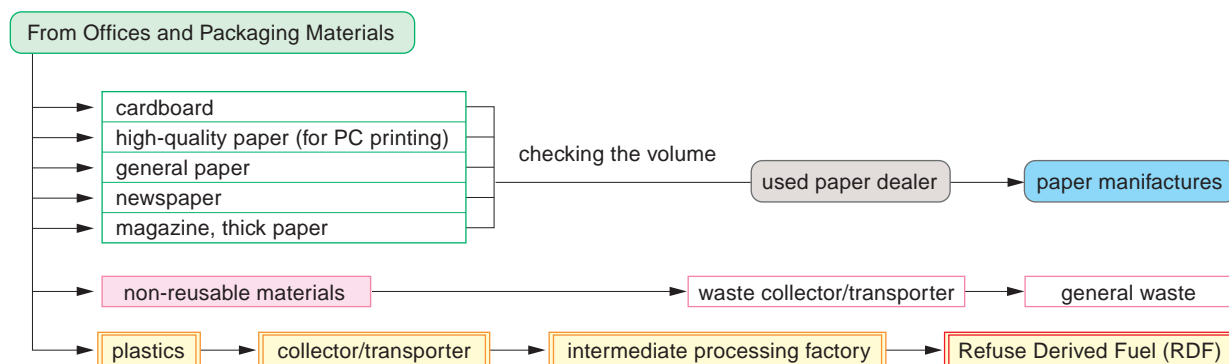
Kikkoman Corp. possesses a special disposal facility, sludge dehydrators and a final disposal site (controlled reclaiming site with an area of 2,853 sq. m.) to properly manage waste.



Wastewater Disposer / Sludge Dehydrator

#### 3) General Wastes

Wastes are collected separately as below, and disposed of accordingly. We are making efforts to achieve the recycling and reusing rates as stated in the mid-term goals (p. 10).



### Recycling Laws

#### 1) Food Recycling Law

The Kikkoman Group has achieved the recycling and reusing rates provided in the Food Recycling Law that enforces food processors to control food residues and to recycle them. Further, the Kikkoman Group is developing processing methods to reduce food waste and treat wastewater, and possible means to process food waste into compost and feed.

#### Container and Packaging Recycling Law

In order to recycle containers and packages collected separately, the Kikkoman Group is developing recyclable containers and packages, and are trying to establish recycling channels. In addition, Kikkoman is actively involved in the activities of the Japan Containers and Packaging Recycling Association.



Construction materials recycling yard

#### 3) Construction Materials Recycling Act

In accordance with the Construction Materials Recycling Act, waste construction materials specified in the law, such as concrete, asphalt and timber, are separated and recycled as resource materials.

#### 4) The Kikkoman Group is observing other relevant Recycling Laws.

### Communication on Environmental Activities (cases)

The Kikkoman Group publicizes its efforts and experiences in environmental preservation both inside and outside the Group to share and enhance people's consciousness to care for the environment.

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#### Biotechnology Class

The Noda Institute for Scientific Research, which was established with funds provided by Kikkoman Corp. has been organizing biotechnology classes for local people (100 persons older than the junior high school students) since 1992. Since 2002, experimental classes for 20 senior high school students have been conducted. Admission is free to both classes. The classes aim to educate people in biology and biotechnology including introducing examples of environmental preservation measures using biological technology.

On August 6, 2004, a lecture meeting was held on the theme "Environmental purification by biotechnology."

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#### Exhibitions on Environmental Preservation Activities

In order to have more opportunities to communicate with stakeholders, exhibitions on environmental preservation activities were increasingly held.

Annual general meetings

of shareholders:

= Panels showing the environmental preservation activities of the Kikkoman Group are exhibited at a corner of the conventional hall where the Annual general meetings of shareholders is held.

Soy Sauce Museum = Photos and articles are exhibited in the Soy Sauce Museum to inform visitors of the importance of environmental issues and measures taken by the Kikkoman Group to solve these problems.



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#### Symposium on the Environment 2004 in Chiba

The Environment Department of Kikkoman Corp. presented "Kikkoman's efforts for the environment" at Workshop No.5 "Toward a cyclical society" at the Symposium on the Environment 2004 Chiba held at the Chiba City High Poly-Tech Center on September 25, 2004.



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#### Tokyo University of Marine Sciences and Technology: Open Seminar

Kikkoman took part in the open seminar on "Considering environmental problems viewed from water and wastes" and presented the company's "water quality analysis and the use of byproducts from its production process as fish feed" as parts of its environmental preservation activities. The open seminar was held at the Shinagawa Liaison Center of the Tokyo University of Marine Science and Technology on January 20, 2005.





### Environmental Preservation Programs of Affiliated Corporations

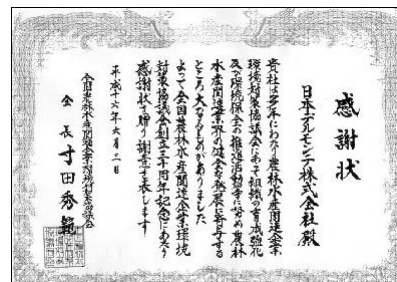
#### Nippon Del Monte Corp.

"Give shape to the word 'Tasty!' The Del Monte of vegetables and fruits." Under this motto, Nippon Del Monte aims to offer products that are good for one's health, and makes every effort to preserve the natural environment, which is the mother of the company's products.

Nippon Del Monte Corporation website: <http://www.delmonte.co.jp/english>

#### Nippon Del Monte received the Award from the Environment Conference for the Companies Related to Agriculture, Forestry and Fisheries in Japan.

Nippon Del Monte was awarded at the 30th anniversary ceremony of the National Environmental Council of Agriculture and Forestry Related Corporations held in June 2004. The reasons for the award were that, as a member, Del Monte has worked to strengthen the organization of the conference, promoted environmental preservation, and contributed to the sound development of businesses in the fields of agriculture, forestry and fisheries.



#### Effective use of Plant Waste by Recycling, Reusing and Reducing them

In Nippon Del Monte Iwate Factory, vegetable and fruit residues occupy a large portion of the total waste. The company has long been promoting the effective use of these residues. Through the three most effective ways of using them, the total amount of plant disposal was successfully reduced.

1) Merchandise from pressed apple fibers	730 tons
2) Livestock feed (fresh)	100 tons
3) Livestock feed (dry)	400 tons
<b>total</b>	<b>1,230 tons</b>

Plant waste from apples, carrots and tomatoes are almost totally reused.

#### Target is "Zero Waste"

Nippon Monte Fukushima Factory set the goal of "Recycle more than 99.7% of Waste," and established the "Zero Waste Promotion Committee" to achieve the goal. By January 2005, the amount of wastes being recycled and reused reached 99.98 percent. Yet, the factory is exploring other ways to recycle and reuse its wastes.

#### Heat Collection in the Process of Washing Containers

To wash bottles in the beverage bottling line in the Gunma Factory, hot water is circulated at the temperature of 85°C. In the past, the water was disposed of after use. Now, by introducing a plate-type heat exchanger, the heat from the disposed water is recovered, and used to warm water for the following process. Through this, 100 kiloliters of heavy oil was saved a year. At the same time, it was effective to lower the temperature of discharged water in summer, reducing the load for waste water treatment.





## Environmental Preservation Programs of Affiliated Corporations

### Mann's Wine Co., Ltd.

Wine is a gift from nature. For Mann's Wine, the natural environment is a partner in its production, and the foundation for its business sustainability.

Mann's Wine is making daily efforts to enhance the health of its natural environment.

Mann's Wine Co., Ltd. website: <http://www.manns.co.jp/> (Only Japanese version is available.)

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#### A Lighter Bottle

Mann's Wine successfully reduced the volume of glass use and the weight of a standard wine bottle from 360 grams to 290 grams by changing its configuration without lowering its strength. As a result, load for transportation has been reduced.

Expected reduction: 110.9 kg per pallet x 14 pallets per truck  
= 1.5 tons per truck



Left 360 g bottle    Right 290 g bottle

#### Rotary Filter for Discharged Water Treatment

At the Katsunuma Factory, the belt-conveyor-type screen filter had been used to remove floating particles in discharged water before treating it. But the screen often got blocked and its efficiency fell. The factory replaced the conveyor-type screen filter with a rotary-type screen filter, which has proven to successfully remove all floating particles. Thus, the load on discharged water treatment was lightened, and now clean water is poured into the neighboring river.



Rotary-type screen filter

#### Rolling-type Seal Cap

For the traditional standard wine bottles (720ml), 3-dimensionally molded seal caps were used. They were bulky and needed a great deal of packaging material. Mann's Wine introduced linear seal feeders that made it possible to roll a sheet of material. With this introduction, the use of packaging material has been much reduced.

Expected reduction of material:

A box of material for 3-D molding produces caps for 6000 bottles.

A box of material for 2-D molding produces caps for 15,384 bottles.

Suppose 5,200 cases (62,400 bottles) of wine are produced a day, the total weight of the material for seal caps would be reduced by approximately 60 percent.



linear seal feeder

#### Maintaining Natural Environmental Beauty and Opening the Park to the Public

The Komoro factory in Nagano prefecture is located on a hill looking down the river Chikuma with Mt. Asama at the back. Taking advantage of this topography, Mann's Wine built "Manjuen," a 10,000 sq. m. wide Japanese-style garden. Many visitors come here to enjoy the natural beauty of the area in all seasons.



Manjuen

### Environmental Preservation Programs of Affiliated Corporations

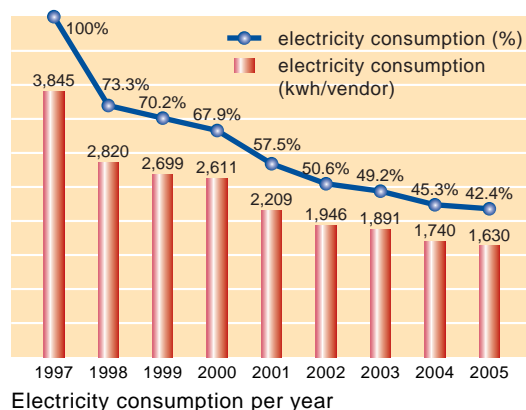
#### Tone Coca-Cola Bottling Co., Ltd.

Tone Coca-Cola Bottling Co., Ltd., is sincerely trying to offer its customers "refreshing satisfaction" together with Coca Cola. Under the motto of the company, "We think, We do," the company is making efforts to be a "responsible corporate citizen" in Chiba, Ibaraki and Tochigi prefectures where the company operations.

Tone Coca-Cola Bottling Co., Ltd. website: <http://www.tone.ccbc.co.jp/> (Only Japanese version is available.)

#### Improving "Eco-Vender," an energy saving vending machine

As more than one third of its sales outlets are vending machines, Tone Coca-Cola Bottling, has been aggressively taking energy saving measures on vending machines. The major pillar is the replacement of older venders with "Eco-Vender." The vender is equipped with an automatic refrigerating mechanism and an automatic light adjusting mechanism. In summer season, the automatic refrigerating mechanism makes it possible for the venders to chill the products to lower than the designated temperature in the morning and stops chilling to just keep them cool in the afternoon when electricity demand peaks. The lighting mechanism has a light sensor and a timer that control switching of fluorescent lamps, and the fluorescent lamps themselves are inverter-controlled, which reduce luminance when necessary. Since introducing this vending machine in 1996, several improvements have been made. The new vending machine to be introduced in 2005 will reduce power use by 57.6 percent of the vendor introduced in 1997.



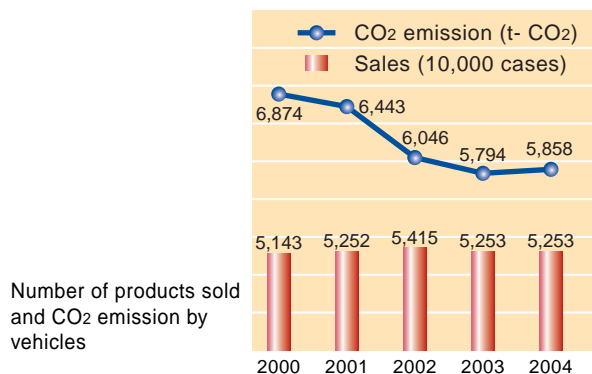
#### Automatic vending machines using alternatives to chlorofluorocarbons

Considering ozone layer preservation, the automatic vending machines for cans and PET bottles equipped with large compressors use R407C gas, and other vending machines for cups equipped with small compressors use R134a gas as refrigerants in place of chlorofluorocarbons. Even though both gases have zero ozone depletion potential, their global warming potentials are higher than carbon dioxide. It is, therefore, necessary to prepare to switch to other non-chlorofluorocarbon refrigerants that would not deplete the ozone layer and would still lower global warming.

- a) Cooler with an HC refrigerant using propane as a natural refrigerant
- b) Cooler using a CO<sub>2</sub> refrigerant as its global warming potential is by far lower than alternative chlorofluorocarbon gases currently used (under testing).
- c) Development and employment of a free-piston Sterling cooler using helium which has zero ozone depletion potential and zero global warming potential (under testing).

#### Load on the environment has been lowered by rationalizing distribution

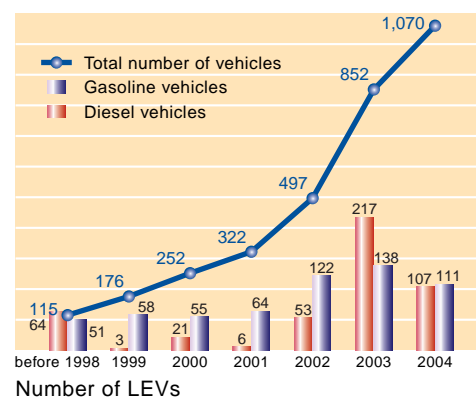
Tone Coca-Cola Bottling introduced a new logistics information system (LIS) combining the telephone ordering system at the Customer Service Center and supply chain management (SCM). As a result of higher efficiency in receiving orders, distribution for production, and work at the factory, CO<sub>2</sub> emission per case has been lowered.



Number of products sold and CO<sub>2</sub> emission by vehicles

#### Reducing CO<sub>2</sub> and NO<sub>x</sub> emission by introduction of LEVs

Tone Coca-Cola Bottling is reducing CO<sub>2</sub> and NO<sub>x</sub> emission by using more low-emission vehicles (LEVs). In 2004, 218 LEVs (107 gasoline and 111 diesel vehicles) were introduced, and the total number of LEVs of the company increased to 1,070. The company possesses 19 natural gas vehicles (NGVs) and is planning to increase NGVs as the number of supply stations increases.



Number of LEVs

### Environmental Preservation Programs of Affiliated Corporations Eatsia Co., Ltd.

Tone Soft Drink Co., Ltd. that has devotedly produced refreshing and delicious products changed its name to Eatsia Co., Ltd. in November 2004 to mark its 30th anniversary. The new name embodies the hope of the company to "become closer to every customer," and is made combining "Eats"(symbolizing food) and "IA"(symbolizing kingdom). Under this new name, the company will endeavor to create a pleasant, healthy and environmentally friendly kingdom.

Eatsia Co., Ltd. website: <http://www.eatsia.co.jp/> (Only Japanese version is available.)

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#### New aerator saves energy

At Eatsia, an active sludge method using the activity of aerobic bacteria is applied for waste water treatment. To supply oxygen to the aerating tank, an underwater aerator had been used from the time of installing the equipment. It had a huge underwater motor to agitate the inside of the tank to distribute the air coming through the pipe. In this method, the motor had to be always rotating using big amount of electricity, and maintenance cost for the aerators was expensive because of its harsh condition. Eatsia replaced the aerator with the OHR-type aerator. With this machine, air is blown into the large tube with raised portions inside from the bottom. This enables both stirring and air supply at the same time, and consequently maintenance became easier, and power saved amounted to 200,000 kWh in the year.



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#### Reuse of used tealeaves

From manufacturing PET bottled tea "So-ken-bi-cha," over 2,800 tons of plant residues are discharged a year. So far, the residues have been entirely reused for compost. As it was found that the residues of adlay and brown rice, which are main components of "so-ken-bi-cha," contained rich nutrients useful as feed for cattle, a quarter of the residue was used for sale for that purpose in 2004.



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#### Reuse of coffee grounds

Chaffs (thin skin) discharged in the process of roasting coffee beans had been totally disposed of as industrial waste. It has become known recently that chaffs could help to deodorize feces and to keep the stall warm when applied on the ground. In this way, a way to reuse chaffs in stalls in goods was realized. In 2004, 33 percent of chaffs were sold to stalls. Eatsia expects to make further reductions in discharging waste in this way.





### Environmental Preservation Programs of Affiliated Corporations

#### Kikkoman Foods, Inc.

With more than 30 years in existence in the United States, Kikkoman Foods, Inc. now possesses a total of 120,000-kiloliter production capacity combining its Wisconsin and California plants. Now as "America's Kikkoman," KFI carries out its responsibilities and contributions to the society and land of America.

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#### Pollution Prevention Award 2004

The Business Environmental Resource Center established by the Sacramento city and county offices, and private sector agencies involved in water quality, waste and energy instituted the Pollution Prevention Award 10 years ago to honor corporations and organizations making contributions in pollution prevention. In 2004, the environmental performances of the KFI California Plant notably as "reusing byproducts and wastes" and "reducing the use of electricity, water and fuels, and dumping in landfills" were recognized and it was given the Pollution Prevention Award.



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#### The WRAP Award in 4 years in spell

The KFI California Plant received the Waste Reduction Award Program (WRAP) Award also in 2004 from the California State Integrated Waste Management Board which judges corporate efforts made in every year. This was the 5th award since 1999, and 4th in consecutive years from 2001.



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#### Introduction of waste compressors

The KFI California had entrusted the collection of cardboard and plastic film wastes to the city. But now, it compresses these wastes inside the plant, and sells them to dealers. Thus, waste disposal cost has been reduced.



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#### Leak detectors in action

At the KFI Wisconsin plant, various sensors (based on conductivity of each liquid) are installed to monitor the overflow of liquids from the tanks. The information from these sensors is centrally monitored, and in case of leakage, an alarm is given on the screen for swift action.



### Environmental Preservation Programs of Affiliated Corporations Kikkoman (S) Pte. Ltd.

Kikkoman (S) Pte. Ltd. (KSP) located in the beautiful country of Singapore filled with green and gardens was established in 1983 as the second overseas plant of the Kikkoman Group. It started shipping in full scale in 1985. It is determined to protect the garden city environment in its business operations.

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#### Networking of the collection of drained steam completed

Drained steam had been discharged in the past, but now a system to collect steam from all processes has been adopted enabling it to be used for boilers. This has helped to save water and fuel.



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#### Automatic stopping system to save electricity

Separated air channels were installed in 2003 to allow each valve to stop sending air each time a process is finished. In 2004, a new system was introduced to automatically stop the operation of some compressors when the load on them is very low. This system further enabled saving power for compressors.



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#### Condensed water from a heat exchanger used as warm water

Condensed water from a heat exchanger which had been drained is now used as warm water, leading to water and fuel saving.



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#### Better working environment in the plant premises

The dining hall for employees within the factory has been turned into a cafeteria with higher hygienic consideration. The rest and recreation hall for the employees has been renovated. In addition, land plots for future factory buildings were covered with lawn, and trees were planted in the premises to increase greenery on the factory site.





### Environmental Preservation Programs of Affiliated Corporations Kikkoman Foods Europe, B.V.

Kikkoman Foods Europe, B.V. (KFE) entered its 8th year of operations in its beautiful environment in the Netherlands. All the employees are working together for environmental preservation under ISO 14001 certification, and are also supporting environmental protection activities in the country.

#### Support to a forestation project

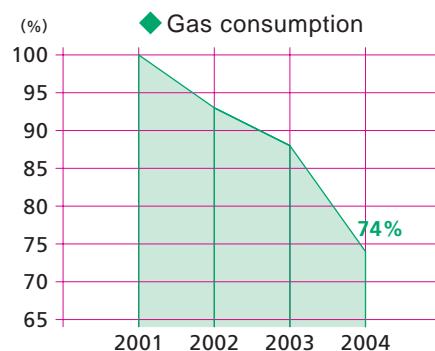
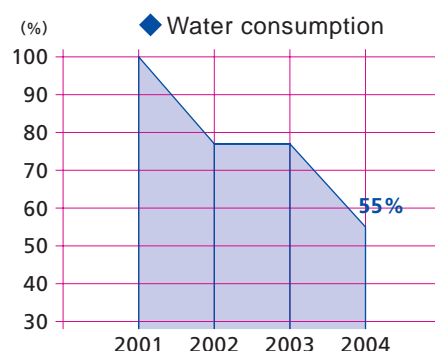
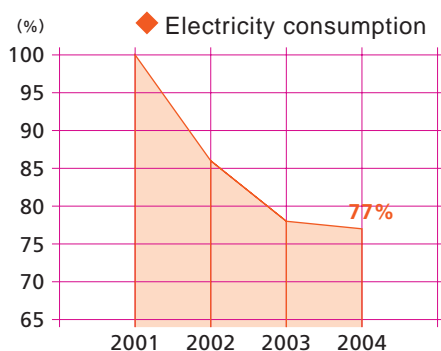
As part of its contribution to the community environment, KFE is supporting the Greening Funds (Het National Groenfonds) of the Netherlands. The Funds are promoting forestation projects in the country to improve the environment as well as to slow global warming. Kikkoman's donation was allocated to plant 30,000 seedlings in wide Het Hikerveld Natural Park located 60 kilometers southwest from the plant. When these seedlings grow, there will be wild birds and wild animals visiting them. In this park, there are cultural facilities including the Local Cultural Museum, and the demonstration of the traditional sheep breeding using sheepdogs as partners. Traditionally, support to the Funds has been given mainly by public organizations. The KFE donation is highly appreciated as "it may draw attention to the Funds from the private sector."



#### Energy saving performances

KFE initiated an energy saving project to reduce utility costs. The following charts show the amounts of electricity, water and gas used to produce one kiloliter of soy sauce in the past four years comparing with the level in fiscal year 2001 as 100.

Cleverer uses of the large compressor as well as washing and cooling water have been devised and practiced, and improvements were made to air-conditioners and boilers.



# Keeping Harmony with Society

## Social Activities of the Kikkoman Group

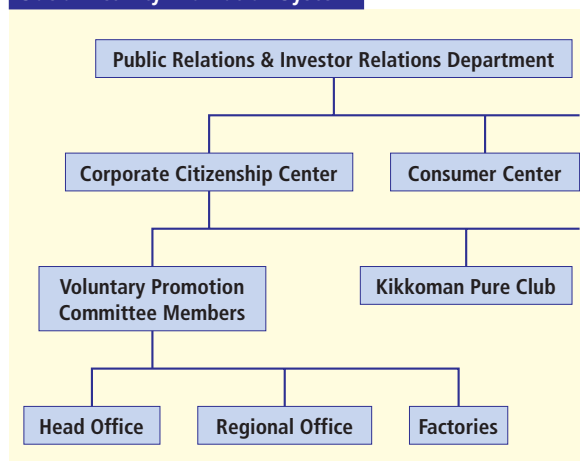
The Kikkoman Group respects the culture, tradition and customs of the respective localities where its business bases are located, and makes efforts to contribute to the development of local societies through business, social and voluntary activities with an aim to become a trusted corporate citizen.

### Social Activity Promotion System of Kikkoman.

Under the management policy to “become a company whose existence is meaningful to the global society,” Kikkoman promotes social activities from food and health perspectives “while valuing Japanese food culture and keeping harmony with world food cultures and the environment,” and systems devoted for such activities are established as follows:

- 1) Corporate Citizenship Center  
The central body of social activity within Kikkoman corp. to plan and administer programs in order to realize the basic concept.
- 2) Voluntary Promotion Committee Members  
Members appointed at each branch and factory to promote social activities.
- 3) Kikkoman Pure Club  
The organization to manage such events as “Parents and Children Cook and Eat Together” and “Discover World Foods.”

#### Social Activity Promotion System



(see p.38 History of Social Activities of the Kikkoman Group)

### Volunteer Activity Support System for Kikkoman Employees

Community Activity Support System	The corporation provides employees or branches with a money gift to support them in conducting community activities.
Matching Donation System	When employees donate to NPOs or NGOs, the corporation donates at a certain rate.
Volunteer Leave System	An employee can take a long-term leave to take part in a voluntary service.

### Social Activities by Kikkoman.

For the public	“Parents and Children Cook and Eat Together”	Joint cooking experience for parents and children
	“Discover the World Foods”	Charity cooking event co-organized by an NGO
	“Communication with sign language and cooking”	Interaction with the hearing disabled over cooking
	“Promotion of education through food, consuming locally produced products”	Cooking courses and seminars to re-discover the local products and to spread the concept of consuming locally produced products
	Learning Table Preparation from Professionals	Enjoying food preparation with professionals at a restaurant
For the employees	“Learning Programs”	Lecture meetings and experiential courses on the subjects of voluntarism, welfare, international cooperation
	“Participation in Programs”	Participation by employees as staff members in the programs organized by the Corporate Citizenship Center
	“Area Programs”	Local-based programs planned and implemented by branch offices and factories
	“Collection Activities”	Collecting used stamps and other items to donate to NGOs and NPOs for their fund raising
	“Fund-raising Activities”	Fund raising among the employees to help developing countries or disaster-stricken areas

### With a Global Perspective

Operating business on the global level, the Kikkoman Group recognizes the necessity of having a global perspective in performing its social responsibilities, and seeks to maintain a meaningful presence in the world as a global citizen.

#### Participation in the Global Compact

Kikkoman announced its desire to participate in the Global Compact in January 2001, and was the first Japanese company to do so.

The Global Compact is an initiative proposed by UN Secretary General Kofi Annan at the World Economic Forum in Davos in January 1999, and was officially inaugurated at the UN in July 2000. The Global Compact requests participating businesses to support and put into practice the Ten Principles in the four fields of Human Rights, Labor Standards, Environment and Anti-Corruption as far as possible.

##### Human Rights

1. Businesses should support and respect the protection of internationally proclaimed human rights; and
2. make sure that they are not complicit in human rights abuses.

##### Labour Standards

3. Business should uphold the freedom of association and the effective recognition of the right to collective bargaining;
4. the elimination of all forms of forced and compulsory labour;
5. the effective abolition of child labour; and
6. the elimination of discrimination in respect of employment and occupation.

##### Environment

7. Businesses should support a precautionary approach to environmental challenges;
8. undertake initiatives to promote greater environmental responsibility; and
9. encourage the development and diffusion of environmentally friendly technologies.

##### Anti-Corruption

10. Businesses should work against all forms of corruption, including extortion and bribery.

(Principle 10 was added at the Global Compact Leaders' Summit held in June 2004.)

The participation in the Global Compact is a means for Kikkoman to demonstrate its management concept to "become a company whose existence is meaningful to the global society."

#### Participation in the World Business Council for Sustainable Development (WBCSD)

The World Business Council for Sustainable Development (WBCSD) was established in 1991 by the International Chamber of Commerce and other business organizations. Its membership consists of 175 corporations in more than 35 countries. With a business point of view, the WBCSD advocates adding the concept of "environmental efficiency" to the conventional "economic efficiency" in order to realize sustainable development on the global level and carries out activities to this effect. As a member of the Council, Kikkoman is working to realize its purpose.

#### Discover World Cuisines

The Kikkoman Corporate Citizenship Center organizes "Discover World Cuisines" for the public inviting members from NGOs engaged in international cooperation as lecturers who demonstrate cuisines from developing countries. Participants enjoy food together and listen to their stories to understand the culture and lives.

In 2004, three "Discover World Cuisines" meetings were held and the cuisines of Bangladesh, Laos and Ethiopia were featured respectively. Participation fees were all donated to related NGOs.



# Consideration toward Customers

The Kikkoman Group considers the delivery of foods that will make customers happy to be its basic principle. It has systems to serve customers' "Food Health and Safety."

## Safe Food Production

### - Quality Assurance System

At Kikkoman, the strict quality assurance system is applied at every stage of product development, production and marketing by concerned sections with the Quality Assurance Department. At the product development stage, every development team is required to submit an application to the Quality Assurance Committee in accordance to 27 items for "Quality Assurance Audit Application." At the production stage, the Quality Control Division of the production sector monitors the production process according to the "Production Standards." At the marketing stage, relevant departments of distribution, advertising, publicity and sales make joint effort to ensure product distribution without deteriorating the quality, to check misrepresentation or exaggeration in advertising, and to make quick response if something goes wrong with a product and to prevent further occurrences.

#### 27 Items for an application to the Quality Assurance Audit

1	Brand
2	Product classification
3	Product name (volume of contents, number of contents, quality of container)Production code
4	Production code
5	Product code
6	JAS examination
7	Plant in charge
8	Sales channels
9	Section in charge of quality control
10	Production schedule
11	Production plan (volume per year)
12	Possible problems in quality standards and production processes
13	Possible problems in patent, design, trademark, etc.
14	Possible problems in product explanation
15	Label documentation
16	Outline of production processes
17	Microorganisms to be used for production processes
18	Raw material composition standards
19	Production and ingredient standards
20	Microbiological safety and stability
21	Sterilization and bottling conditions
22	Quality assurance period and storage conditions
23	Microbiological test results
24	General storage stability of the product quality
25	Package specifications and conditions to ensure hermetic sealing
26	Environmental assessment of containers and package
27	Others

## Consumer Center

### - Listening to Consumers' Voices

The Consumer Center works as a channel to listen to the voices of consumers. Assigning special staff, it can respond quickly to inquiries, comments and complaints over our products and services using the Kikkoman Quick Response System, which contains relevant data in the computer storage. Precious comments from consumers are communicated to relevant sectors, to be used for improving and developing products and services.

## Table preparation:

### Learning directly from a professional

Kikkoman considers the table to be an important place for family communication, and supports a richer mealtime in customers' families by holding "Learning table preparation from a professional" for customers. In each session, a professional teaches tips for cooking, table manners and table setting coordination to prepare a delicious meal and create a pleasant atmosphere. In 2004, the class was held in a restaurant and the theme was "Christmas dinner at home."



## Parents and children experience

### "Food" together

Kikkoman organizes an event "All about Soy Sauce" inviting community people to experience how soy sauce is made and how it is best enjoyed. They observe the production process, touch soy sauce products, listen to explanations and eat various foods with soy sauce. In 2004, with cooperation from the Noda City Chamber of Commerce and the association of retailers, Kikkoman prepared various programs to have visitors enjoy soy sauce from different angles. They included a tour in the plant, quizzes and games, tasting comparison of different kinds of soy sauce, baking soy sauce rice crackers, and tasting boxed lunches flavored with soy sauce.

Kikkoman also organizes events to help people rediscover interesting foods of different localities in cooperation with affiliated corporations of the Kikkoman Group. These events include enjoying green soybeans from Noda city, as Noda is one of the top-class producers of green soybeans in Japan, wine and noodles from Katsunuma, stuffed pancakes and buckwheat noodle making from Komoro.





### Living hand in hand with Neighboring Communities

The Kikkoman Group considers it very important to communicate with people in localities where its branches and plants are located. The branches and plants continue to carry out activities to help community people.

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#### Kotohira Shrine Festival held

The 12th year festival was held at Kotohira Shrine within the premises of the former Kikkoman Noda Head Office in November 2004. Kotohira Shrine is a branch shrine of Kotohira head shrine in Sanuki in Shikoku that the predecessor soy sauce brewer had erected by transferring the spirit from the head shrine in the Edo period. It is placed under the control of the Association of Shinto Shrines. The first 12th year festival was held with a concept that "if you work hard for 12 years, you would have a little money saved, therefore, a festival should be held to thank community people involved and to please them with amusement." This was the beginning of the Kikkoman's traditional festival. In the festival 2004, a lot of social events were organised, such as a cooking contest, demonstrations of martial arts, performances of Japanese drumming and music, exhibitions of chrysanthemums and bonsai. Many local people enjoyed the festival. Their money offerings to the shrine and proceedings from the sales of charms were donated to the Local Social Welfare Council and earthquake victimized places.



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#### Area Programs

The Kikkoman Corporate Citizenship Center supports community-based social contribution activities initiated by branch offices and factories in the name of "Area Programs." In 2004, the Takasago Factory, Chitose Factory, Ojima Production Dept. and Noda Head Office conducted Area Programs. The Ojima Production Dept. invited people from a neighboring social welfare workshop to rice pounding, and cooked fried noodles for them. They also enjoyed a musical exchange gathering together.



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#### Lighting a street with hybrid street lamps

The Nagareyama Production Dept. installed two lamps on the border of the factory compound to light the street so that elementary school children could feel safe in walking during dark hours. The street lamps are environment-friendly as they are equipped with solar and wind generators (capacity 450 W).



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#### Kikkoman General Hospital

<http://www.kikkoman.co.jp/hospital/>  
(Only Japanese version is available.)

Kikkoman General Hospital was originally established as a hospital commemorating the coronation of Emperor Taisho by the Soy Sauce Brewers Union (now Kikkoman) in 1914. Now the hospital has developed into a general hospital with 600 outpatients per day, 115 in-patients, and 180 full-time employees. It is widely used by local people. With the motto of "Challenge and Reform," the hospital is engaged in the prevention and treatment of diseases with an aim to become a meaningful presence to local communities.





# Supporting Employees' Voluntarism

The Kikkoman Group is providing employees with an easy-to-work environment, and furthermore, supports their activities to positively relate with society with pride as members of the Kikkoman Group.

## Voluntary Promotion Committee

The Kikkoman Corporate Citizenship Center assigns employees at factories and branch offices as social activity promoters, and maintains the network supporting employees engaged in social services. Social activity promoters are responsible for the following:

- 1) Making announcements and promoting used item collections, fund raising, sales within the company in their areas,
- 2) Communicating with local volunteer organizations,
- 3) Promoting communication between the area in charge and the Corporate Citizenship Center.
- 4) Participating in the meeting of the Volunteer Promotion Committee

The last meeting of the Volunteer Promotion Committee was held in April 2004.

## Sign Language Project

The Kikkoman Corporate Citizenship Center has chosen as its promotion target "Sign Language" which has rich expressional potential, and has been offering training courses to employees to lead them to be interested in the questions of "disabilities" and "welfare."

- 1) Giving courses at new employees' training seminars or Voluntary Promotion Committee meetings.
- 2) Inserting Kikkoman's original sign language textbook into the house organs.
- 3) Organizing entry level classes on Sign Language at all offices in Japan (for voluntary participants)
- 4) Giving classes for cooking staff

The Center supports cooking classes for people with hearing disabilities such as "Communication with sign language and cooking."



## Examples of Cooperation Activities

### Used Item Collection Campaign

In our daily life, there are things that are discarded even though they are still usable. If we collect them and use them wisely, we can turn them into valuable support goods.

In May 2004 the Kikkoman Group launched a Special Collection Campaign for used CDs and used video game software programs, and in July, began a Used Book Collection Campaign.



Under a permanent collection program (A Little Bit of Your Kindness), miswritten postcards, used postage stamps and used telephone cards are collected. The proceeds from selling these items are donated to the related organizations engaged in the improvement of the standard of living in developing countries in Asia, Africa and Latin America.

### Sales in the company

The Kikkoman Group promotes the sales of products made at welfare workshops and handicrafts from developing nations as part of the Group's efforts to assist welfare facilities and developing countries and cooperate with them to help the employees know more about them.

### Fund-raising drives

Once a year, Kikkoman organizes a charity fund-raising drive among the employees asking them to donate "instead of purchasing gifts for Valentine's Day or return gifts for White Day." In addition, emergency disaster relief fundraising drives are organized on the nationwide scale whenever a disaster occurs. Further, in November 2004, the Environment Department took the initiative in conducting a fund-raising activity for the Chiba Environmental Restoration Fund, which is instituted based on the "Environmental Restoration Plan" of Chiba prefecture aiming to convey the rich natural environment to future generations.



Donation box with the logo

### Pride in Enriching Food Culture

The Kikkoman Group contributes to the betterment of people's life by keeping the supply of high quality merchandise and services as well as proposing new ideas to enrich food culture.

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#### Kikkoman Institute for International Food Culture

<http://kiifc.kikkoman.co.jp/>

The Kikkoman Institute for International Food Culture was established in July 1999 to conduct research, promote cultural and social activities, and collect and disseminate information regarding soy sauce and fermented seasonings. In the Center at the Noda Head Office Building, there are a Video Corner, Data Search and Reading Corner, and Exhibition Corner, which are open to researchers and students both from Japan and overseas as well as local community people. At the Food Forum conducted by the Institute, professionals of various fields are invited as lecturers to introduce their top-notch studies on world food culture. In May 2005, the Institute attempted to restore "Edo soy sauce." Using "Mankin sangyou bukuro" (industrial textbook) published in 1732 as a textbook, materials, utensils and equipment used in those days were revived as much as possible, and the process was followed as described in the book. (The photograph portrays "shikomi" work mixing koji of soy sauce taken out of the "room" with salty water). Edo soy sauce thus made was "thin in color," "thin in taste but salty," "weakly scented" and was very different from the thick type soy sauce of today. Using the soy sauce, "Cuisine in the Edo period" was reproduced following the cookbook of the time. NHK recorded the process of the reproduction of this soy sauce and cuisine and stored it as a database to be utilized in education on food.



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#### Promotion and practice of food education

Nowadays a series of problems concerning food are becoming apparent. They include "nutritionally unbalanced meals, missing meals or eating an unbalanced diet," "lack of care in eating and preparing meals and food," "nutritional disorders due to poor eating habits, and increases in lifestyle related diseases," "loss of traditional food cultures based on the local culture and climate," "decline of trust in the safety of food." Greater attention needs to be given to the meaning and importance of food. It is an important mission for a food corporation to help develop the healthy mind and body of children and prevent lifestyle related diseases through food, and to contribute to the inheritance of healthy food culture.

The Kikkoman Group considers "to offer knowledge, information and experience on 'food' which is useful to live a healthy, happy eating life" as "Kikkoman's food education" and will start planning programs to promote food education. Concretely, we will develop various activities such as "factory tours to help people experience brewing," "delivering classes by employees," "food culture educational activities by the Kikkoman Institute for International Food Culture," "advice on diets by the Kikkoman General Hospital on the website and simple recipes using delicious seasonal materials" and "experiential study programs on food for parents and children."

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#### "Know and Eat locally produced food" cooking class series

With the purpose, "Eat Japanese vegetables deliciously and think about Japanese food culture," the Kikkoman Group commissions the Nutrition Improvement Popularization Institute to undertake cooking classes for its members in various localities. The class is titled "Know and eat your locally produced food" and cuisines using vegetables grown in each locality are cooked. In 2004, cooking classes were held in Saitama city, Higashi Murayama city, Koshigaya city, Higashi Kurume city, Souka city and Akiruno city.



### Social Programs by the Affiliated Corporations

The corporations in the Kikkoman Group carry out programs that will contribute to society to suit their respective social environments, and make efforts to establish their presence as corporate citizens.

#### Contribution to traffic safety (Mann's Wine)

In order to ensure safe entrance to a national route from the town road next to the factory, a curved mirror was installed at the time of improving the factory fence, and the mirror was donated to the township. At the annual Katsunuma town festival, the Certificate of Appreciation was presented to Mann's Wine.



#### "Adoption Movement" for environmental beautification (Mann's Wine)

The Katsunuma Town Tourist Bureau has launched the "adoption system" to keep the roads and public facilities along the roadside clean. "Foster parents" are people engaged in such businesses as tourist farms, tourist homes and wineries in Katsunuma. They are assigned with a certain area (adopted children) to take good care of.

Mann's Wine Katsunuma Factory concluded an "Adoption Arrangement" with the area from Katsunuma-cho Yama-ku junction on the national route 411 to the northern end of the factory compound, and employees participate in cleaning activities.



#### Chikuma city Zero Trash Movement (Nippon Del Monte)

On the annual Environmental Beautification Day of Nagano prefecture, Chikuma city is developing the Zero Trash Movement for each district. Nippon Del Monte Nagano Factory took part in the movement with aims to promote "communication with local people" and to show the corporate attitude as a company that had acquired ISO14001 certification, and cleaned the Kuiseke district of the city.



#### Cleaning Tokyo for the Olympic Torch Relay (Tone Coca-Cola)

In June 2004, the Olympic Torch relay for Athens Olympic Games was run for 53 kilometers in Tokyo. Hoping to make Tokyo to look more beautiful when the group of runners carrying the Torch ran through, 31 employees of Tone Coca-Cola participated in the volunteer group "Green Team" and cleaned for the Asakusa-Ueno-Suidobashi relay section.





## Social Programs by the Affiliated Corporations

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### Lake Kasumigaura Grand Cleaning Operation

(Tone Coca-Cola)

On one still cold day in March, Ishioka city in Ibaragi prefecture organized "Lake Kasumigaura Grand Cleaning Operation." From Tone Coca-Cola, 20 members participated in this event. They cooperated with purification around Lake Kasumigaura, while interacting with participants from local community groups. The hot drinks that Tone Coca-Cola prepared for participants pleased them.



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### Contributing to US Food Culture (KII)

Kikkoman International Inc. (KII) received the ward by the Minister of Foreign Affairs in Japan at the celebration of 150 years of Japan-US exchange held in June 2004 for its contribution to spread Japanese food culture among American people and to gain their understanding about it. Since its establishment in 1957, KII has been devising recipes using soy sauce and developing products to suit to the palate of American people to enrich their food culture. KII's efforts were highly recognized by the Japanese government.



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### World Citizen Award (KFI)

Since 1966 International Institute of Wisconsin, which is an organization to promote international cooperation and mutual understanding, has been awarding the World Citizen Award to individuals who contributed to the promotion of international exchange. In 2004, KFI received the Award for the first time as a corporation. It is the result of the highly acclaimed contributions given to the locality since the foundation of the company.



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### Visit of Sinta Claas (KFE)

In the Netherlands, Sinta Claas comes to visit various places at the beginning of December every year. Sinta Claas means the St. Nicholas Festival (December 6) carried over from olden times in the country. It is considered as the original form of Santa Clause. In 2004, Sinta Claas came to KFE and received a large welcome by employee's families. In KFE there are many events held where all the employees can enjoy a whole day together for things like a sailing party and a barbecue party.



## Contents of the Data

## Introduction of the Corporations in the Environmental Accounting

### Contents

- Introduction of the Corporation	35
- History of Environment Preservation Activities of the Kikkoman Group	37
- History of Social Activities of the Kikkoman Group	37
- Flow of Discharged Materials in the Manufacturing Process of Soy Sauce	38
- Environmental Accounting Details Kikkoman Group: Total	39
- Environmental Accounting Details Kikkoman Group: Individual Corporations	43

## Introduction of the Corporations

### Websites of Corporations in Japan

Kikkoman Corp.	<a href="http://www.kikkoman.com">http://www.kikkoman.com</a>
Nippon Del Monte Corp.	<a href="http://www.delmonte.co.jp/english/">http://www.delmonte.co.jp/english/</a>
Mann's Wine Co., Ltd.	<a href="http://www.manns.co.jp/">http://www.manns.co.jp/</a> (Only Japanese version is available.)
Tone Coca-Cola Bottling Co., Ltd.	<a href="http://www.tone.ccbc.co.jp/">http://www.tone.ccbc.co.jp/</a> (Only Japanese version is available.)
Eatsia Co., Ltd.	<a href="http://www.eatsia.co.jp/">http://www.eatsia.co.jp/</a> (Only Japanese version is available.)

### Overseas Corporations

<b>KIKKOMAN FOODS, INC. (KFI)</b>	
Head Office / Wisconsin Plant:	N1365 Six Corners Road, Walworth, Wisconsin 53184, U.S.A.
Year of Establishment:	1972
Major Products:	Kikkoman Soy Sauce, Teriyaki Sauce, Salt Reduced Soy Sauce, etc.
California Plant:	1000 Glenn Drive, Folsom, California 95630, U.S.A.
Year of Establishment:	1998
Major Products:	Kikkoman Soy Sauce
<b>KIKKOMAN (S) PTE. LTD. (KSP)</b>	
Head Office / Plant:	7 Senoko Crescent, Singapore 758263
Year of Establishment:	1983
Major Products:	Kikkoman Soy Sauce, Teriyaki Sauce, etc.
<b>KIKKOMAN FOODS EUROPE B.V. (KFE)</b>	
Head Office / Plant:	De Vosholen 100, 9611 TG Sappemeer, The Netherlands
Year of Establishment:	1996
Major Products:	Kikkoman Soy Sauce, Teriyaki Sauce, etc.



## History of Environment Preservation Activities of the Kikkoman Group

1970 Aug.	<ul style="list-style-type: none"> <li>Environmental Measurement Committee was established.</li> </ul>
1971 all year	<ul style="list-style-type: none"> <li>Environmental load was surveyed among all the operations centers.</li> </ul>
1972 Dec.	<ul style="list-style-type: none"> <li>Environmental Management Division was established.</li> </ul>
1976 Oct.	<ul style="list-style-type: none"> <li>Environment Analysis Center was established.</li> </ul>
1989 Nov.	<ul style="list-style-type: none"> <li>Boiler for Soy sauce cake began operation.</li> </ul>
1992 Mar.	<ul style="list-style-type: none"> <li>Environment Protection Division was established.</li> </ul>
Apr.	<ul style="list-style-type: none"> <li>General Environment Protection Committee was established.</li> </ul>
Jun.	<ul style="list-style-type: none"> <li>Environmental Protection Campaign was launched.</li> </ul>
Oct.	<ul style="list-style-type: none"> <li>Environmental Charter was formulated and promulgated.</li> </ul>
1993 Mar.	<ul style="list-style-type: none"> <li>Voluntary Plan was formulated.</li> </ul>
Mar.	<ul style="list-style-type: none"> <li>Environmental Management System began to be established.</li> </ul>
1995 Jun.	<ul style="list-style-type: none"> <li>Internal Environmental Auditing began in production, research and hospital sectors.</li> </ul>
Sep.	<ul style="list-style-type: none"> <li>Kikkoman joined the World Business Council for Sustainable Development (WBCSD).</li> </ul>
1997 May	<ul style="list-style-type: none"> <li>Noda 1st Factory obtained ISO 14001 certification.</li> </ul>
Oct.	<ul style="list-style-type: none"> <li>Internal Environmental Auditing began on a trial basis in related companies and overseas factories.</li> </ul>
1998 Oct.	<ul style="list-style-type: none"> <li>Kikkoman received "Environment and Resource Cooperation Award" by the Nihon Shokuryo Shinbun. (The Japan Food Journal)</li> </ul>
Nov.	<ul style="list-style-type: none"> <li>Annual Environmental Report was disclosed on the Internet.</li> </ul>
1999 Aug.	<ul style="list-style-type: none"> <li>General Environment Protection Committee renamed General Environment Preservation Committee.</li> </ul>
2000 Feb.	<ul style="list-style-type: none"> <li>Goals to reduce greenhouse gases was determined.</li> </ul>
Feb.	<ul style="list-style-type: none"> <li>Goals to recycle waste was determined and published.</li> </ul>
Jul.	<ul style="list-style-type: none"> <li>Annual Environmental Report including an Environmental Accounting and an independent review report was disclosed on the Internet.</li> </ul>
2001 Jan.	<ul style="list-style-type: none"> <li>Kikkoman participated in UN "Global Compact" Initiative.</li> </ul>
Jul.	<ul style="list-style-type: none"> <li>Annual Environmental Report of the Kikkoman Group was disclosed on the Internet.</li> </ul>
Nov.	<ul style="list-style-type: none"> <li>Award by the Minister of Agriculture, Forestry and Fisheries was given in the Resources and Environmental Preservation Category.</li> </ul>
2003 Mar.	<ul style="list-style-type: none"> <li>All major overseas plants obtained ISO 14001 certification.</li> </ul>
Jul.	<ul style="list-style-type: none"> <li>Noda Plant received the Minister of Health, Labour and Welfare Award for Safety and Hygiene for 2003.</li> </ul>
Dec.	<ul style="list-style-type: none"> <li>Noda Head Office received the Sustainable Architecture Award of the year 2003 from the Japan Institute of Architecture.</li> </ul>
2004 Feb.	<ul style="list-style-type: none"> <li>Kikkoman was erected as a "Green Top Runner" by the Sustainable Management Rating Institute.</li> </ul>
Mar.	<ul style="list-style-type: none"> <li>Kikkoman received the Director's Award of the Industrial Science and Technology Policy and Environment Bureau, the Ministry of Economy, Trade and Industry.</li> </ul>
May	<ul style="list-style-type: none"> <li>Kikkoman received the Award from the Sustainable Management Rating Institute at the 4th Management Forum of Japan</li> </ul>
Oct.	<ul style="list-style-type: none"> <li>Chitose Factory, as a model of environmental consideration, received the Minister of Economy, Trade and Industry Award as a model for the greening of the factory.</li> </ul>

## History of Social Activities of the Kikkoman Group

(Cases mainly conducted by the Corporate Citizenship Center)

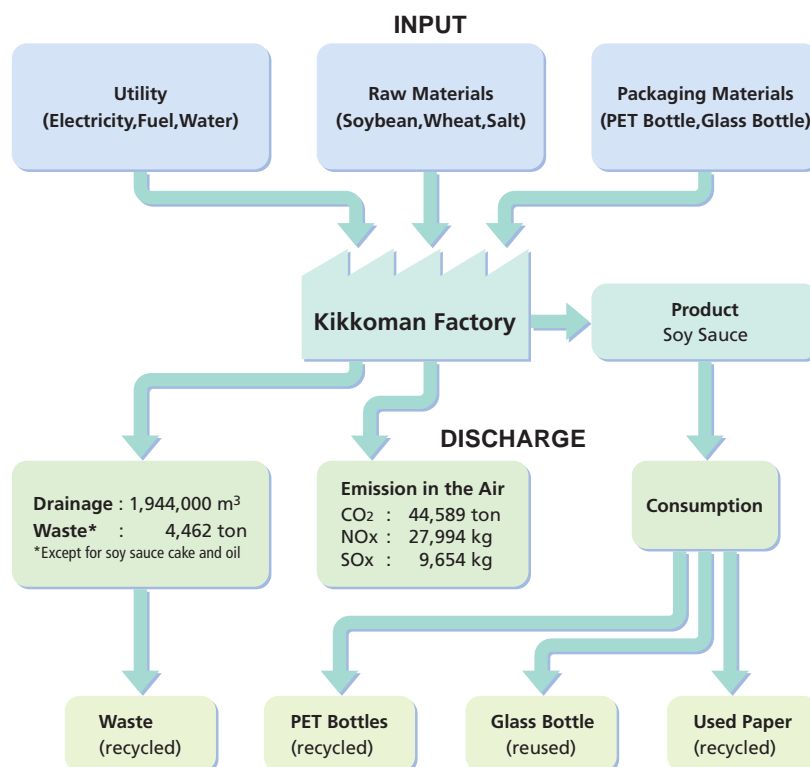
1997 Jun.	<ul style="list-style-type: none"> <li>Corporation Citizenship Center established.</li> </ul>
Jul.	<ul style="list-style-type: none"> <li>Volunteer Promotion Committee meeting started.</li> </ul>
Sep.	<ul style="list-style-type: none"> <li>Collection of used stamps and prepaid telephone and railway cards for fund-raising started.</li> </ul>
Nov.	<ul style="list-style-type: none"> <li>Area Programs started.</li> </ul>
	<ul style="list-style-type: none"> <li>Piccolo Welfare Workshop (Ojima Factory) started.</li> </ul>
1998 Feb.	<ul style="list-style-type: none"> <li>St. Valentine's Day Charity fund-raising started.</li> </ul>
	<ul style="list-style-type: none"> <li>Collection of unused postcards for fund-raising started.</li> </ul>
Nov.	<ul style="list-style-type: none"> <li>Asunaro Welfare Workshop (Noda Plant) started.</li> </ul>
1999 Apr.	<ul style="list-style-type: none"> <li>Fund-raising for the victims of the earthquake in Colombia</li> </ul>

## Reference Data

1999 Jun.	• Special Sales Campain of breads made by Nishiazabu Welfare Workshop held in the Tokyo Head Office
Jul.	• Kikkoman Pure Club established.
Aug.	• International Event to Learn More about Asia
Oct.	• Exciting Factory Tour (Takasago Factory) started
	• Fund-raising for the victims of the earthquake in Taiwan
2000 Jun.	• Katsunuma Wine Story started
2001 Apr.	• World Culture Caravan started
May	• Training Course on sign language and Braille for the employees in cooperation with the workers' union started
	• Kikkoman "Children's Forest" Nature School in Shimizu Park
Jun.	• Gathering to send books to children in Laos started
Oct.	• Fund-raising for the victims of September 11 attacks in New York
2002 Apr.	• Campaign to collect used CDs, game software programs to offer to the Hunger Free World for fund-raising
Jun.	• "World Culture Festival - Food Stand Villages of 7 Countries"
	• Campaign to "Add Braille to your business cards" (Tokyo Head Office)
Jul.- Nov.	• Junior Times Reporters Information Collecting Program in partnership with the International Education Information Center
Oct.	• "Flower Fantasia & Lunch Time Live" (Noda City Welfare Workshop Noda, Mebuki Institute)
	• Kikkoman and AFLAC "Experience with grapes" in Katsunuma Winery (Chofu Gakuen)
2003 Mar.	• Parents and Children Cooking Class started
Apr.	• "Discover World Cuisines" in collaboration with an NGO started
Sep.	• Diet Education-"Eat Local Products" Promotion Program started
	• Communication with Sign Language and Food started
Oct.	• "Japan-America Grassroots Summit Chiba Convention" Noda Regional Workshop (Cooperation with Center for International Exchange)
Dec.	• "Discover World Cuisine - Ethiopia" in collaboration with an NGO
	• Charity Used Book Market jointly with corporations in Minato city, Tokyo
2004 Feb.	• Training course on Sign Language for employees
2004 Aug.	• Table Preparation Course by a Professional started
Nov.	• Contribution to Chuetsu earthquake victims
2005 Feb.	• Contribution to Sumatra offshore earthquake and tsunami victims

## Flow of Discharged Materials in the Manufacturing Process of Soy Sauce

The chart shows incoming and outgoing materials to and from the production process of soy sauce, Kikkoman's major products, from environmental aspect. Energy sources, raw materials and packaging materials are used as inputs to produce soy sauce. In the production process, green house gases (mainly CO<sub>2</sub>), wastewater and wastes are discharged. After consumption, users dispose PET bottles.



## Reference Data

# Environmental Accounting Details Kikkoman Group: Total

## 1. Overview of 2004 (million yen)

Environment Preservation		Environment Preservation Benefits	
Investment:	981	Energy use reduction:	-15
Expenditure:	3,841	Energy (fossil fuel) use control:	187
		Waste and byproduct reduction:	19
		Waste and byproduct control (recycling):	839
		Total:	1,030

## 2. Investment and Expenditure for Environment Preservation

The totals of investment and expenditure for environment preservation in 2004 were calculated based on the Guidelines of the Ministry of the Environment. The total amount of investment amounted to 981 million yen and that of expenditure 3,841 million yen.

Table-1: Total of the Group / Investment and Expenditure for Environment Preservation (million yen)

Classification in the Guidelines by the Ministry of the Environment		
Category	Inv.	Exp.
<b>1) Business Area Costs</b>	<b>973</b>	<b>2,687</b>
(1) Pollution Prevention: Waste water processing equipment, air and noise prevention measures	306	970
(2) Global Environmental Conservation: Energy-saving measures and preventive measures against the destruction of the ozone layer.	664	617
(3) Resource Cycling: Costs for efficient use of resources, waste disposal cost, etc.	4	1,100
<b>2) Upstream/Downstream Costs</b>	<b>0</b>	<b>577</b>
(1) Distribution: "Green Purchase," Processing recycled containers, Container and Package Recycling Act (reuse as merchandise), Measures to support Classified Waste Collection (Eco-Cap)	0	577
<b>3) Administration Costs</b>	<b>2</b>	<b>361</b>
(1) Promotion of environmental preservation: Environment management, environmental analyses, ISO-related expenses, greening and beautification (head office & factories), etc.	2	361
<b>4) R &amp; D Costs</b>	<b>6</b>	<b>191</b>
(1) R & D: Research for use of byproducts, container development	6	191
<b>5) Social Activities Costs</b>	<b>0</b>	<b>25</b>
(1) Nature preservation, greening & beautification (other than head office and factories) (2) Supporting environmental preservation organizations (3) Supporting local communities, etc.	0	25
<b>6) Environmental Remediation Costs</b>	<b>0</b>	<b>0</b>
(1) Restoration of soil pollution and environmental damage (2) Payments for settlement, compensation, penalty and lawsuit, (3) Insurance and reserve fund.	0	0
<b>Total</b>	<b>981</b>	<b>3,841</b>

## 3. Environment Preservation Benefits

The benefits from investment and expenditure in environmental preservation were measured by the amounts of energy consumption and reduction of discharged materials, and then these amounts were calculated as monetary values according to the following formula. Steps:

1. The environmental loads of the energy usage and the wastes and byproducts discharge in terms of carbon dioxide (CO<sub>2</sub>) were obtained based on the Eco-Action 21 "Environment Activity Evaluation Program, 2004 version" of the Ministry of the Environment.
2. In order to convert the loads to heavy oil (A grade) volume in kiloliters, the carbon dioxide volumes of both energy usage and waste discharge were respectively divided by a heavy oil discharge coefficient.
3. The heavy oil volumes of both were added, and multiplied by the average unit price of heavy oil to determine the monetary effect of our environment preservation benefits.

$$^*1 \quad ^*2 \quad ^*3 \\ \text{( Environmental load CO}_2\text{t / Discharge coefficient of heavy oil 2.710 CO}_2\text{t/kl ) } * \text{ Average heavy oil unit purchase price (yen/kl)}$$

\*1 Discharge coefficient of the Ministry of the Environment is provided in its Eco-Action 21 "Environment Activity Evaluation Program, 2004 version."

\*2 A-grade heavy oil discharge coefficient: 2.710 CO<sub>2</sub> t/kl

\*3 Average unit price of heavy oil purchase price at the Kikkoman Noda Factory in 2004: 35,241 yen/kl.

## Environmental Accounting Details Kikkoman Group: Total

### 3-1. Energy Use Reduction Benefit

In pursuing production and sales activities, manufacturers have to rely on great amounts of energy sources such as heavy oil, electricity, natural gas, gasoline and so on. The Kikkoman Group continues to reduce the use of these energy sources to lighten the load on the environment.

The total reduction benefit is shown in Table-2. Compared to the previous year, the use of electricity, heavy oil and gasoline was increased, and the burden on the environment rose by 1,122 CO<sub>2</sub> tons in total. According to the following calculation formula, the energy use reduction benefit decreased 15 million yen.

Table-2: Environmental Loads by Energy Type-1 (in terms of CO<sub>2</sub>)

Energy	Discharge Coefficient	2004		2003		Rise and fall in CO <sub>2</sub> /y	2004 / 2003 %
		Consumption	in CO <sub>2</sub> /y	Consumption	in CO <sub>2</sub> /y		
Heavy oil (A)	2.710 CO <sub>2</sub> /t	24,488 t	66,362	24,285 t	65,812	550	100.8
Light oil	2.624 CO <sub>2</sub> /t	1,281 t	3,361	1,272 t	3,338	24	100.7
Kerosene	2.492 CO <sub>2</sub> /t	52 t	130	15 t	37	92	346.7
Electricity	0.378 CO <sub>2</sub> /1000kwh	126,491,000 kwh	47,814	123,173,000 kwh	46,559	1,254	102.7
LPG	3.002 CO <sub>2</sub> /t	1,929 t	5,791	1,932 t	5,800	-9	99.8
Gas	2.108 CO <sub>2</sub> /1000m <sup>3</sup>	10,605,000 m <sup>3</sup>	22,355	11,075,000 m <sup>3</sup>	23,346	-991	95.8
Gasoline	2.322 CO <sub>2</sub> /t	1,205 t	2,798	1,118 t	2,596	202	107.8
Total			148,611		147,489	1,122	100.8

### 3-2. Energy (Fossil Fuel) Use Control Benefit

The Kikkoman group continues to use plant fuel as an alternative to fossil fuel in order to control the increase of CO<sub>2</sub> in the air caused by burning fossil fuel. The Kikkoman Group's main product, soy sauce is made mainly from wheat and soybeans and, in the production process, soy sauce cake and soy sauce oil are produced as byproducts. It is said that plants will not cause CO<sub>2</sub> to increase when they are burned as they absorb CO<sub>2</sub> in the air carbon dioxide assimilation activity. Therefore, the use of soy sauce cake and oil instead of fossil fuel substitutes will lead to a lightening of the environmental load. The amounts of soy sauce cake and soy sauce oil the Kikkoman Group used as fuels in 2004 are shown in table 3. The total amounts of using both byproducts reached 14,348 tons in CO<sub>2</sub> conversion. This means the reduction of fossil fuel use, and 187 million yen was saved as well.

$(14,348 / 2.710) * 35,241 \approx 187$  million yen

Note: Soy sauce cake is used only for special boilers, and soy sauce oil is used for ordinary boilers.

Table-3: Environmental Loads by Energy Type-2 (in terms of CO<sub>2</sub>)(Group)

Energy use	Discharge coef.* CO <sub>2</sub> /t	2004	
		Consumption t/y	in CO <sub>2</sub> /y
Soy sauce cake (fuel)	1.180	8,757	10,333
Soy sauce oil (fuel)	2.700	1,487	4,015
Total		10,244	14,348

\* Discharge coefficient of soy sauce cake and soy sauce oil are determined by the Kikkoman Group.

Soy sauce cake and soy sauce oil are incinerated at the factories of Kikkoman Corp.

## Reference Data

# Environmental Accounting Details Kikkoman Group: Total

## 3-3. Wastes and Byproducts Reduction Benefit

The Kikkoman Group considers all materials discharged from the production processes of merchandise as byproducts and wastes, including saleable and reusable materials but excluding soy sauce cake, soy sauce oil and sweet sake cake which are actually used as energy sources or sold as feed, and continues to reduce wastes, and the environmental load from them.

As shown in Table 4, the total environmental load in 2004 decreased by 1,456 CO<sub>2</sub> tons, and 19 million yen in monetary terms.

$(1,456 / 2.710) * 35,241 \approx 19$  million yen

Table-4: Environmental Loads by Waste and Byproduct Type (in terms of CO<sub>2</sub>)(Group)

Wastes and byproducts	Discharge coef.* CO <sub>2</sub> t/t	2004		2003		Rise and fall in CO <sub>2</sub> t/y	2004 / 2003 %
		Discharge t/y	in CO <sub>2</sub> t/y	Discharge t/y	in CO <sub>2</sub> t/y		
Plastics	2.600	1,118	2,907	1,057	2,748	159	105.8
Cardboard, wood chips	1.650	4,310	7,112	4,013	6,621	490	107.4
Waste oil	2.900	68	197	186	539	-342	36.6
Pressed apple lees	1.470	264	388	305	448	-60	86.6
Pressed tomato lees	2.149	241	518	229	492	26	105.2
Used green tea leaves	1.789	848	1,517	795	1,422	95	106.7
Sludge	1.100	7,870	8,657	7,580	8,338	319	103.8
Plant residues	2.442	4,952	12,093	5,684	13,880	-1,788	87.1
Garbage	2.442	2,216	5,411	2,361	5,766	-354	93.9
Unburnable wastes **	0.000	9,117	—	8,891	—	—	102.5
<b>Total</b>		<b>31,004</b>	<b>38,800</b>	<b>31,101</b>	<b>40,256</b>	<b>-1,456</b>	<b>96.4</b>

\* Discharge coefficient of pressed apple lees, pressed tomato lees and used green tea leaves are determined by the Kikkoman Group.

\*\* "Unburnable wastes" include cans, scrap irons, glass and ceramics, which do not emit CO<sub>2</sub> when burnt.

## 3-4. Wastes and Byproducts Control (Recycling) Benefit

In order to build a cyclical society, recycling and reusing wastes and byproducts are essential. The amounts of recycled and reused wastes and byproducts are evaluated as having reduced environmental loads. The Kikkoman Group calculated the total amount of recycled and reused materials separately as an environmental benefit. As shown in Table 5, the total benefit from this effort in 2004 was 64,500 CO<sub>2</sub> tons, or 839 million yen.

$(64,500 / 2.710) * 35,241 \approx 839$  million yen

Including the byproducts reuse data ( shown in Table-3), the total recycling and reuse rate is 94.2% for the whole Group.



## Reference Data

# Environmental Accounting Details Kikkoman Group: Total

Table-5: Volume of Recycled Wastes and Byproducts (in terms of CO<sub>2</sub>)(Group)

Wastes and byproducts	Discharge coef.* CO <sub>2</sub> t/t	2004				
		Discharge t/y	in CO <sub>2</sub> t/y	Recycled t/y	Recycling rate %	Recycling volume in CO <sub>2</sub> t/y
Plastics	2.600	1,118	2,907	585	52.3	1,521
Cardboard, wood chips	1.650	4,310	7,112	4,254	98.7	7,019
Waste oil	2.900	67	194	67	100.0	194
Soy sauce cake (feed)	1.180	25,911	30,575	25,911	100.0	30,575
Soy sauce oil (fish feed, other use)	2.700	906	2,446	906	100.0	2,446
Pressed apple lees (feed)	1.470	264	388	264	100.0	388
Pressed tomato lees (feed)	2.149	241	518	241	100.0	518
Used green tea leaves (compost)	1.789	848	1,517	848	100.0	1,517
Sweet sake cake (feed)	1.080	511	552	511	100.0	552
Sludge	1.100	7,870	8,657	6,644	84.4	7,308
Plant residues	2.442	4,952	12,093	4,640	93.7	11,331
Garbage	2.442	2,216	5,411	463	20.9	1,131
Unburnable wastes	0.000	9,117	0	9,017	98.9	0
<b>Total</b>		<b>58,331</b>	<b>72,370</b>	<b>54,351</b>	<b>93.2</b>	<b>64,500</b>

When the wastes used as energy sources are added:

Soy sauce cake (fuel)		8,757		8,757	100.0	
Soy sauce oil (fuel)		1,487		1,487	100.0	
<b>Total</b>		<b>68,575</b>		<b>64,595</b>	<b>94.2</b>	

\* Discharge coefficient of soy sauce cake, soy sauce oil, pressed apple lees, pressed tomato lees, used green tea leaves and sweet sake cake are determined by the Kikkoman Group.

## 4. Other Environmental Loads

The volumes of water usage and air pollutants discharge (NO<sub>x</sub> and SO<sub>x</sub>) are shown in Table-6. Only the comparison of the data of these articles with the previous year is shown. The amounts of toxic chemicals are not presented here because the Kikkoman Group only uses limited amounts of them specifically for experimental purposes. The data from overseas factories are converted in accordance with Kikkoman criteria.

Table-6: Other Environmental Loads (the Production Sector)(Group)

	2004	2003	Rise and fall	2004 / 2003 %
Water	8,333,000 kl	8,245,000 kl	88,000 kl	101.1
NO <sub>x</sub>	93,650 kg	99,920 kg	-6,270 kg	93.7
SO <sub>x</sub>	29,542 kg	28,772 kg	770 kg	102.7

## Reference Data

# Environmental Accounting Details Kikkoman Group: Individual Corporations

## 1. Overview of 2004

### Environment Preservation (million yen)

	Kikkoman	Del Monte	Mann's Wine	Tone Coca-Cola	Eatsia	KFI	KSP	KFE
Investment	165	21	18	630	8	131	8	1
Expenditure	2,284	388	47	899	75	112	9	27

### Environment Preservation Benefits (million yen)

	Kikkoman	Del Monte	Mann's Wine	Tone Coca-Cola	Eatsia	KFI	KSP	KFE
Energy use reduction	43	-36	1	-3	-11	-7	-1	1
Energy (fossil fuel) use control	187	0	0	0	0	0	0	0
Wastes and byproducts reduction	9	-20	1	-4	30	3	0	0
Wastes and byproducts control (recycling)	364	111	19	67	102	134	26	15
Total	603	55	21	60	121	129	25	16

## 2. Investment and Expenditure for Environment Preservation

Table-7-1: Environment Preservation Investment and Expenditure (million yen)  
(Kikkoman, Del Monte, Mann's Wine, Tone Coca-Cola)

Classification by the Ministry of the Environment	Kikkoman		Del Monte		Mann's Wine		Tone Coca-Cola	
Category	Inv.	Exp.	Inv.	Exp.	Inv.	Exp.	Inv.	Exp.
1. Business Area Costs	158	1,630	20	351	18	36	630	493
1) Pollution Control	132	553	12	239	18	20	8	31
2) Global Environmental Conservation	25	223	8	2			622	388
3) Resource Cycling	2	854		110		15		74
2. Upstream/Downstream Activity Costs	0	207	0	1	0	0	0	366
1) Distribution		207		1				366
3. Administration Costs	2	246	0	36	0	10	0	32
1) Environment Preservation	2	246		36		10		32
4. R & D Costs	6	191	0	0	0	0	0	0
1) R & D	6	191						
5. Social Activities Costs	0	10	0	0	0	0	0	8
1) Nature Preservation 2) Support to NGOs and Communities		10						8
6. Environmental Remediation Costs	0	0	0	0	0	0	0	0
1) Restoration 2) Compensation								
Total	165	2,284	21	388	18	47	630	899

## Reference Data

# Environmental Accounting Details Kikkoman Group: Individual Corporations

Table-7-2: Environment Preservation Investment and Expenditure (million yen)  
(Eatsia, KFI, KSP, KFE)

Classification by the Ministry of the Environment	Eatsia		KFI		KSP		KFE	
Category	Inv.	Exp.	Inv.	Exp.	Inv.	Exp.	Inv.	Exp.
1. Business Area Costs	8	66	131	85	8	6	1	18
1) Pollution Control	8	39	128	69		5		15
2) Global Environmental Conservation			1	1	8	1		
3) Resource Cycling		27	2	15		1	1	3
2. Upstream/Downstream Activity Costs	0	2	0	2	0	0	0	0
1) Distribution		2		2				
3. Administration Costs	0	6	1	25	0	2	0	3
1) Environment Preservation		6	1	25		2		3
4. R & D Costs	0	0	0	0	0	0	0	0
1) R & D								
5. Social Activities Costs	0	0	0	0	0	1	0	6
1) Nature Preservation 2) Support to NGOs and Communities						1		6
6. Environmental Remediation Costs	0	0	0	0	0	0	0	0
1) Restoration 2) Compensation								
Total	8	75	131	112	8	9	1	27

## 3. Environment Preservation Benefits

### 3-1. Energy Use Reduction Benefit (Environmental Loads by Energy Type in terms of CO<sub>2</sub>)

Table-8-1: Kikkoman Corp. / Environmental Loads by Energy Type (in terms of CO<sub>2</sub>)

Energy	Discharge Coefficient	2004		2003		Rise and fall in CO <sub>2</sub> t/y	2004 / 2003 %
		Consumption	in CO <sub>2</sub> t/y	Consumption	in CO <sub>2</sub> t/y		
Heavy oil (A)	2.710 CO <sub>2</sub> t/kl	9,960 kl	26,992	10,769 kl	29,184	-2,192	92.5
Kerosene	2.492 CO <sub>2</sub> t/kl	7 kl	17	7 kl	17	0	100.0
Electricity	0.378 CO <sub>2</sub> t/1000kwh	51,436,000 kwh	19,443	51,696,000 kwh	19,541	-98	99.5
LPG	3.002 CO <sub>2</sub> t/t	1,884 t	5,656	1,882 t	5,650	6	100.1
Gas	2.108 CO <sub>2</sub> t/1000m <sup>3</sup>	3,215,000 m <sup>3</sup>	6,777	3,690,000 m <sup>3</sup>	7,779	-1,001	87.1
Total			58.885		62,171	-3,286	94.7

## Reference Data

# Environmental Accounting Details Kikkoman Group: Individual Corporations

Table-8-2: **Del Monte** / Environmental Loads by Energy Type (in terms of CO<sub>2</sub>)

Energy	Discharge Coefficient	2004		2003		Rise and fall in CO <sub>2</sub> /y	2004 / 2003 %
		Consumption	in CO <sub>2</sub> /y	Consumption	in CO <sub>2</sub> /y		
Heavy oil (A)	2.710 CO <sub>2</sub> /t/kl	10,429 kl	28,263	9,657 kl	26,170	2,092	108.0
Light oil	2.624 CO <sub>2</sub> /t/kl	14 kl	37	11 kl	29	8	127.3
Kerosene	2.492 CO <sub>2</sub> /t/kl	45 kl	112	8 kl	20	92	562.5
Electricity	0.378 CO <sub>2</sub> /1000kwh	18,789,000 kwh	7,102	17,243,000 kwh	6,518	584	109.0
LPG	3.002 CO <sub>2</sub> /t	1 t	3	2 t	6	-3	50.0
Gasoline	2.322 CO <sub>2</sub> /t/kl	59 kl	137	69 kl	160	-23	85.5
Total			35,654		32,903	2,750	108.4

Table-8-3: **Mann's Wine** / Environmental Loads by Energy Type (in terms of CO<sub>2</sub>)

Energy	Discharge Coefficient	2004		2003		Rise and fall in CO <sub>2</sub> /y	2004 / 2003 %
		Consumption	in CO <sub>2</sub> /y	Consumption	in CO <sub>2</sub> /y		
Heavy oil (A)	2.710 CO <sub>2</sub> /t/kl	267 kl	724	302 kl	818	-95	88.4
Electricity	0.378 CO <sub>2</sub> /1000kwh	3,055,000 kwh	1,155	2,958,000 kwh	1,118	37	103.3
Total			1,878		1,937	-58	97.0

Table-8-4: **Tone Coca-Cola** / Environmental Loads by Energy Type (in terms of CO<sub>2</sub>)

Energy	Discharge Coefficient	2004		2003		Rise and fall in CO <sub>2</sub> /y	2004 / 2003 %
		Consumption	in CO <sub>2</sub> /y	Consumption	in CO <sub>2</sub> /y		
Light oil	2.624 CO <sub>2</sub> /t/kl	1,197 kl	3,141	1,170 kl	3,070	71	102.3
Electricity	0.378 CO <sub>2</sub> /1000kwh	7,873,000 kwh	2,976	7,858,000 kwh	2,970	6	100.2
Gasoline	2.322 CO <sub>2</sub> /t/kl	990 kl	2,299	917 kl	2,129	170	108.0
Total			8,416		8,170	246	103.0

Table-8-5: **Eatsia** / Environmental Loads by Energy Type (in terms of CO<sub>2</sub>)

Energy	Discharge Coefficient	2004		2003		Rise and fall in CO <sub>2</sub> /y	2004 / 2003 %
		Consumption	in CO <sub>2</sub> /y	Consumption	in CO <sub>2</sub> /y		
Heavy oil (A)	2.710 CO <sub>2</sub> /t/kl	3,303 kl	8,951	3,028 kl	8,206	745	109.1
Light oil	2.624 CO <sub>2</sub> /t/kl	70 kl	184	91 kl	239	-55	76.9
Electricity	0.378 CO <sub>2</sub> /1000kwh	14,380,000 kwh	5,436	14,073,000 kwh	5,320	116	102.2
LPG	3.002 CO <sub>2</sub> /t	44 t	132	48 t	144	-12	91.7
Gasoline	2.322 CO <sub>2</sub> /t/kl	152 kl	353	129 kl	300	53	117.8
Total			15,055		14,208	848	106.0

Table-8-6: **KFI** / Environmental Loads by Energy Type (in terms of CO<sub>2</sub>)

Energy	Discharge Coefficient	2004		2003		Rise and fall in CO <sub>2</sub> /y	2004 / 2003 %
		Consumption	in CO <sub>2</sub> /y	Consumption	in CO <sub>2</sub> /y		
Heavy oil (A)	2.710 CO <sub>2</sub> /t/kl	0 kl	0	41 kl	111	-111	0.0
Electricity	0.378 CO <sub>2</sub> /1000kwh	25,776,000 kwh	9,743	24,349,000 kwh	9,204	539	105.9
Gas	2.108 CO <sub>2</sub> /1000m <sup>3</sup>	6,522,000 m <sup>3</sup>	13,748	6,453,000 m <sup>3</sup>	13,603	145	101.1
Gasoline	2.322 CO <sub>2</sub> /t/kl	4 kl	9	3 kl	7	2	133.3
Total			23,501		22,925	576	102.5

## Reference Data

# Environmental Accounting Details Kikkoman Group: Individual Corporations

Table-8-7: **KSP** / Environmental Loads by Energy Type (in terms of CO<sub>2</sub>)

Energy	Discharge Coefficient	2004		2003		Rise and fall in CO <sub>2</sub> /y	2004 / 2003 %
		Consumption	in CO <sub>2</sub> /y	Consumption	in CO <sub>2</sub> /y		
Light oil	2.624 CO <sub>2</sub> t/kl	529 kl	1,388	488 kl	1,281	108	108.4
Electricity	0.378 CO <sub>2</sub> t/1000kwh	2,803,000 kwh	1,060	2,809,000 kwh	1,062	-2	99.8
Total			2,448		2,342	105	104.5

Table-8-8: **KFE** / Environmental Loads by Energy Type (in terms of CO<sub>2</sub>)

Energy	Discharge Coefficient	2004		2003		Rise and fall in CO <sub>2</sub> /y	2004 / 2003 %
		Consumption	in CO <sub>2</sub> /y	Consumption	in CO <sub>2</sub> /y		
Electricity	0.378 CO <sub>2</sub> t/1000kwh	2,379,000 kwh	899	2,187,000 kwh	827	73	108.8
Gas	2.108 CO <sub>2</sub> t/1000m <sup>3</sup>	868,000 m <sup>3</sup>	1,830	932,000 m <sup>3</sup>	1,965	-135	93.1
Total			2,729		2,791	-62	97.8

## 3-2. Wastes and Byproducts Reduction Benefit (Environmental Loads by Wastes and Byproducts Type in terms of CO<sub>2</sub>)

Table-9-1: **Kikkoman Corp.** / Environmental Loads by Wastes and Byproducts Type (in terms of CO<sub>2</sub>)

Wastes and byproducts	Discharge coef. CO <sub>2</sub> /t	2004		2003		Rise and fall in CO <sub>2</sub> /y	2004 / 2003 %
		Discharge t/y	in CO <sub>2</sub> /y	Discharge t/y	in CO <sub>2</sub> /y		
Plastics	2.600	199	517	194	504	13	102.6
Cardboard, wood chips	1.650	217	358	287	474	-116	75.6
Waste oil	2.900	61	177	165	479	-302	37.0
Sludge	1.100	4,120	4,532	4,241	4,665	-133	97.1
Plant residues	2.442	293	716	320	781	-66	91.6
Garbage	2.442	163	398	195	476	-78	83.6
Unburnable wastes	0.000	260	—	735	—	—	35.4
Total		5,313	6,698	6,137	7,379	-681	90.8

Table-9-2: **Del Monte** / Environmental Loads by Wastes and Byproducts Type (in terms of CO<sub>2</sub>)

Wastes and byproducts	Discharge coef.* CO <sub>2</sub> /t	2004		2003		Rise and fall in CO <sub>2</sub> /y	2004 / 2003 %
		Discharge t/y	in CO <sub>2</sub> /y	Discharge t/y	in CO <sub>2</sub> /y		
Plastics	2.600	291	757	229	595	161	127.1
Cardboard, wood chips	1.650	578	954	609	1,005	-51	94.9
Waste oil	2.900	4	12	5	15	-3	80.0
Pressed apple lees	1.470	264	388	305	448	-60	86.6
Pressed tomato lees	2.149	241	518	229	492	26	105.2
Used green tea leaves	1.789	848	1,517	795	1,422	95	106.7
Sludge	1.100	1,815	1,997	1,378	1,516	481	131.7
Plant residues	2.442	1,044	2,549	682	1,665	884	153.1
Garbage	2.442	27	66	25	61	5	108.0
Unburnable wastes	0.000	1,088	—	1,284	—	—	84.7
Total		6,200	8,757	5,541	7,220	1,537	121.3

\* Discharge coefficient of pressed apple lees, pressed tomato lees, and used green tea leaves are determined by the Kikkoman Group.



## Reference Data

# Environmental Accounting Details Kikkoman Group: Individual Corporations

Table-9-3: **Mann's Wine** / Environmental Loads by Wastes and Byproducts Type (in terms of CO<sub>2</sub>)

Wastes and byproducts	Discharge coef. CO <sub>2</sub> t/t	2004		2003		Rise and fall in CO <sub>2</sub> t/y	2004 / 2003 %
		Discharge t/y	in CO <sub>2</sub> t/y	Discharge t/y	in CO <sub>2</sub> t/y		
Plastics	2.600	35	91	29	75	16	120.7
Cardboard, wood chips	1.650	44	73	41	68	5	107.3
Waste oil	2.900	1	3	0	0	3	—
Sludge	1.100	353	388	332	365	23	106.3
Plant residues	2.442	423	1,033	471	1,150	-117	89.8
Garbage	2.442	3	7	3	7	0	100.0
Unburnable wastes	0.000	179	—	205	—	—	87.3
<b>Total</b>		<b>1,038</b>	<b>1,595</b>	<b>1,081</b>	<b>1,666</b>	<b>-71</b>	<b>95.8</b>

Table-9-4: **Tone Coca-Cola** / Environmental Loads by Wastes and Byproducts Type (in terms of CO<sub>2</sub>)

Wastes and byproducts	Discharge coef. CO <sub>2</sub> t/t	2004		2003		Rise and fall in CO <sub>2</sub> t/y	2004 / 2003 %
		Discharge t/y	in CO <sub>2</sub> t/y	Discharge t/y	in CO <sub>2</sub> t/y		
Plastics	2.600	426	1,108	441	1,147	-39	96.6
Cardboard, wood chips	1.650	3,113	5,136	2,791	4,605	531	111.5
Garbage	2.442	1,598	3,902	1,676	4,093	-190	95.3
Unburnable wastes	0.000	6,907	—	6,353	—	—	108.7
<b>Total</b>		<b>12,044</b>	<b>10,146</b>	<b>11,261</b>	<b>9,845</b>	<b>302</b>	<b>103.1</b>

Table-9-5: **Eatsia** / Environmental Loads by Wastes and Byproducts Type (in terms of CO<sub>2</sub>)

Wastes and byproducts	Discharge coef. CO <sub>2</sub> t/t	2004		2003		Rise and fall in CO <sub>2</sub> t/y	2004 / 2003 %
		Discharge t/y	in CO <sub>2</sub> t/y	Discharge t/y	in CO <sub>2</sub> t/y		
Plastics	2.600	116	302	98	255	47	118.4
Cardboard, wood chips	1.650	113	186	98	162	25	115.3
Waste oil	2.900	1	3	1	3	0	100.0
Sludge	1.100	356	392	372	409	-18	95.7
Plant residues	2.442	2,875	7,021	3,846	9,392	-2,371	74.8
Garbage	2.442	31	76	27	66	10	114.8
Unburnable wastes	0.000	59	—	0	—	—	—
<b>Total</b>		<b>3,551</b>	<b>7,979</b>	<b>4,442</b>	<b>10,286</b>	<b>-2,307</b>	<b>77.6</b>

Table-9-6: **KFI** / Environmental Loads by Wastes and Byproducts Type (in terms of CO<sub>2</sub>)

Wastes and byproducts	Discharge coef. CO <sub>2</sub> t/t	2004		2003		Rise and fall in CO <sub>2</sub> t/y	2004 / 2003 %
		Discharge t/y	in CO <sub>2</sub> t/y	Discharge t/y	in CO <sub>2</sub> t/y		
Plastics	2.600	46	120	62	161	-42	74.2
Cardboard, wood chips	1.650	184	304	135	223	81	136.3
Sludge	1.100	1,226	1,349	1,257	1,383	-34	97.5
Plant residues	2.442	317	774	365	891	-117	86.8
Garbage	2.442	97	237	141	344	-107	68.8
Unburnable wastes	0.000	616	—	309	—	—	199.4
<b>Total</b>		<b>2,486</b>	<b>2,783</b>	<b>2,269</b>	<b>3,002</b>	<b>-220</b>	<b>92.7</b>

## Reference Data

# Environmental Accounting Details Kikkoman Group: Individual Corporations

Table-9-7: **KSP** / Environmental Loads by Wastes and Byproducts Type (in terms of CO<sub>2</sub>)

Wastes and byproducts	Discharge coef. CO <sub>2</sub> /t	2004		2003		Rise and fall in CO <sub>2</sub> /y	2004 / 2003 %
		Discharge t/y	in CO <sub>2</sub> /y	Discharge t/y	in CO <sub>2</sub> /y		
Cardboard, wood chips	1.650	34	56	31	51	5	109.7
Waste oil	2.900	0	0	14	41	-41	0.0
Garbage	2.442	271	662	271	662	0	100.0
Total		305	718	316	754	-36	95.3

Table-9-8: **KFE** / Environmental Loads by Wastes and Byproducts Type (in terms of CO<sub>2</sub>)

Wastes and byproducts	Discharge coef. CO <sub>2</sub> /t	2004		2003		Rise and fall in CO <sub>2</sub> /y	2004 / 2003 %
		Discharge t/y	in CO <sub>2</sub> /y	Discharge t/y	in CO <sub>2</sub> /y		
Plastics	2.600	5	13	4	10	3	125.0
Cardboard, wood chips	1.650	27	45	21	35	10	128.6
Waste oil	2.900	1	3	1	3	0	100.0
Garbage	2.442	26	63	23	56	7	113.0
Unburnable wastes	0.000	8	—	5	—	—	160.0
Total		67	124	54	104	20	119.0

## 3-3. Wastes and Byproducts Control (Recycling) Benefit (Volume of Recycled Wastes and Byproducts in terms of CO<sub>2</sub>)

Table-10-1: **Kikkoman Corp.** / Volume of Recycled Wastes and Byproducts (in terms of CO<sub>2</sub>)

Wastes and byproducts	Discharge coef.* CO <sub>2</sub> /t	2004				
		Discharge t/y	in CO <sub>2</sub> /y	Recycled t/y	Recycling rate %	Recycling volume in CO <sub>2</sub> /y
Plastics	2.600	199	517	198	99.5	515
Cardboard, wood chips	1.650	217	358	217	100.0	358
Waste oil	2.900	61	177	61	100.0	177
Soy sauce cake (feed)	1.180	15,641	18,456	15,641	100.0	18,456
Soy sauce oil (fish feed, other use)	2.700	858	2,317	858	100.0	2,317
Sweet sake cake (feed)	1.080	511	552	511	100.0	552
Sludge	1.100	4,120	4,532	4,120	100.0	4,532
Plant residues	2.442	293	716	293	100.0	716
Garbage	2.442	163	398	162	99.4	396
Unburnable wastes	0.000	260	—	181	69.6	—
Total		22,323	28,023	22,242	99.6	<b>28,018</b>

When the wastes used as energy sources are added:

Soy sauce cake (fuel)		8,757		8,757	100.0	
Soy sauce oil (fuel)		1,487		1,487	100.0	
Total		32,567		32,486	99.8	

\* Discharge coefficient of soy sauce cake, soy sauce oil and sweet sake cake are determined by the Kikkoman Group.

## Reference Data

# Environmental Accounting Details Kikkoman Group: Individual Corporations

Table-10-2: **Del Monte** / Volume of Recycled Wastes and Byproducts (in terms of CO<sub>2</sub>)

Wastes and byproducts	Discharge coef.* CO <sub>2</sub> t/t	2004				
		Discharge t/y	in CO <sub>2</sub> t/y	Recycled t/y	Recycling rate %	Recycling volume in CO <sub>2</sub> t/y
Plastics	2.600	291	757	267	91.8	694
Cardboard, wood chips	1.650	578	954	522	90.3	861
Waste oil	2.900	4	12	4	100.0	12
Pressed apple lees (feed)	1.470	264	388	264	100.0	388
Pressed tomato lees (feed)	2.149	241	518	241	100.0	518
Used green tea leaves (compost)	1.789	848	1,517	848	100.0	1,517
Sludge	1.100	1,815	1,997	1,815	100.0	1,997
Plant residues	2.442	1,044	2,549	1,044	100.0	2,549
Garbage	2.442	27	66	4	14.8	10
Unburnable wastes	0.000	1,088	—	1,074	98.7	—
<b>Total</b>		<b>6,200</b>	<b>8,757</b>	<b>6,083</b>	<b>98.1</b>	<b>8,546</b>

\* Discharge coefficient of pressed apple lees, pressed tomato lees and used green tea leaves are determined by the Kikkoman Group.

Table-10-3: **Mann's Wine** / Volume of Recycled Wastes and Byproducts (in terms of CO<sub>2</sub>)

Wastes and byproducts	Discharge coef. CO <sub>2</sub> t/t	2004				
		Discharge t/y	in CO <sub>2</sub> t/y	Recycled t/y	Recycling rate %	Recycling volume in CO <sub>2</sub> t/y
Plastics	2.600	35	91	0	0.0	0
Cardboard, wood chips	1.650	44	73	44	100.0	73
Waste oil	2.900	1	3	1	100.0	3
Sludge	1.100	353	388	353	100.0	388
Plant residues	2.442	423	1,033	418	98.8	1,021
Garbage	2.442	3	7	0	0.0	0
Unburnable wastes	0.000	179	—	174	97.2	—
<b>Total</b>		<b>1,038</b>	<b>1,595</b>	<b>990</b>	<b>95.4</b>	<b>1,485</b>

Table-10-4: **Tone Coca-Cola** / Volume of Recycled Wastes and Byproducts (in terms of CO<sub>2</sub>)

Wastes and byproducts	Discharge coef. CO <sub>2</sub> t/t	2004				
		Discharge t/y	in CO <sub>2</sub> t/y	Recycled t/y	Recycling rate %	Recycling volume in CO <sub>2</sub> t/y
Plastics	2.600	426	1,108	9	2.1	23
Cardboard, wood chips	1.650	3,113	5,136	3,113	100.0	5,136
Garbage	2.442	1,598	3,902	0	0.0	0
Unburnable wastes	0.000	6,907	—	6,905	100.0	—
<b>Total</b>		<b>12,044</b>	<b>10,146</b>	<b>10,027</b>	<b>83.3</b>	<b>5,160</b>

Table-10-5: **Eatsia** / Volume of Recycled Wastes and Byproducts (in terms of CO<sub>2</sub>)

Wastes and byproducts	Discharge coef. CO <sub>2</sub> t/t	2004				
		Discharge t/y	in CO <sub>2</sub> t/y	Recycled t/y	Recycling rate %	Recycling volume in CO <sub>2</sub> t/y
Plastics	2.600	116	302	97	83.6	252
Cardboard, wood chips	1.650	113	186	113	100.0	186
Waste oil	2.900	1	3	1	100.0	3
Sludge	1.100	356	392	356	100.0	392
Plant residues	2.442	2,875	7,021	2,875	100.0	7,021
Garbage	2.442	31	76	0	0.0	0
Unburnable wastes	0.000	59	—	59	—	—
<b>Total</b>		<b>3,551</b>	<b>7,979</b>	<b>3,501</b>	<b>98.6</b>	<b>7,854</b>

## Reference Data

# Environmental Accounting Details Kikkoman Group: Individual Corporations

Table-10-6: **KFI** / Volume of Recycled Wastes and Byproducts (in terms of CO<sub>2</sub>)

Wastes and byproducts	Discharge coef.* CO <sub>2</sub> t/t	2004				
		Discharge t/y	in CO <sub>2</sub> t/y	Recycled t/y	Recycling rate %	Recycling volume in CO <sub>2</sub> t/y
Plastics	2.600	46	120	9	19.6	23
Cardboard, wood chips	1.650	184	304	184	100.0	304
Soy sauce cake (feed)	1.180	8,368	9,874	8,368	100.0	9,874
Soy sauce oil (other use)	2.700	24	65	24	100.0	65
Sludge	1.100	1,226	1,349	0	0.0	0
Plant residues	2.442	317	774	10	3.2	24
Garbage	2.442	97	237	0	0.0	0
Unburnable wastes	0.000	616	—	616	100.0	—
<b>Total</b>		<b>10,878</b>	<b>12,722</b>	<b>9,211</b>	<b>84.7</b>	<b>10,290</b>

\* Discharge coefficient of soy sauce cake and soy sauce oil are determined by the Kikkoman Group.

Table-10-7: **KSP** / Volume of Recycled Wastes and Byproducts (in terms of CO<sub>2</sub>)

Wastes and byproducts	Discharge coef.* CO <sub>2</sub> t/t	2004				
		Discharge t/y	in CO <sub>2</sub> t/y	Recycled t/y	Recycling rate %	Recycling volume in CO <sub>2</sub> t/y
Cardboard, wood chips	1.650	34	56	34	100.0	56
Soy sauce cake (feed)	1.180	1,071	1,264	1,071	100.0	1,264
Garbage	2.442	271	662	271	100.0	662
<b>Total</b>		<b>1,376</b>	<b>1,982</b>	<b>1,376</b>	<b>100.0</b>	<b>1,982</b>

\* Discharge coefficient of soy sauce cake are determined by the Kikkoman Group.

Table-10-8: **KFE** / Volume of Recycled Wastes and Byproducts (in terms of CO<sub>2</sub>)

Wastes and byproducts	Discharge coef.* CO <sub>2</sub> t/t	2004				
		Discharge t/y	in CO <sub>2</sub> t/y	Recycled t/y	Recycling rate %	Recycling volume in CO <sub>2</sub> t/y
Plastics	2.600	5	13	5	100.0	13
Cardboard, wood chips	1.650	27	45	27	100.0	45
Waste oil	2.900	1	3	1	100.0	3
Soy sauce cake (feed)	1.180	831	981	831	100.0	981
Soy sauce oil (other use)	2.700	24	65	24	100.0	65
Garbage	2.442	26	63	26	100.0	63
Unburnable wastes	0.000	8	—	8	100.0	—
<b>Total</b>		<b>922</b>	<b>1,169</b>	<b>922</b>	<b>100.0</b>	<b>1,169</b>

\* Discharge coefficient of soy sauce cake and soy sauce oil are determined by the Kikkoman Group.

## 4. Other Environmental Loads (Volumes of water used and air pollutants, NO<sub>x</sub> and SO<sub>x</sub>)

Table-11-1: **Kikkoman Corp.** / Other Environmental Loads (the Manufacturing Sector)

	2004	2003	Rise and fall	2004 / 2003 %
Water	3,513,000 kl	3,611,000 kl	-98,000 kl	97.3
NO <sub>x</sub>	37,244 kg	39,071 kg	-1,827 kg	95.3
SO <sub>x</sub>	11,903 kg	12,622 kg	-719 kg	94.3

## Reference Data

# Environmental Accounting Details Kikkoman Group: Individual Corporations

Table-11-2: **Del Monte** / Other Environmental Loads

	2004	2003	Rise and fall	2004 / 2003 %
Water	2,976,000 kl	2,741,000 kl	235,000 kl	108.6
NOx	21,379 kg	19,827 kg	1,552 kg	107.8
SOx	12,473 kg	11,324 kg	1,149 kg	110.1

Table-11-3: **Mann's Wine** / Other Environmental Loads

	2004	2003	Rise and fall	2004 / 2003 %
Water	340,000 kl	460,000 kl	-120,000 kl	73.9
NOx	1,285 kg	1,308 kg	-23 kg	98.2
SOx	319 kg	354 kg	-35 kg	90.1

Table-11-4: **Tone Coca-Cola** / Other Environmental Loads

	2004	2003	Rise and fall	2004 / 2003 %
Water	30,000 kl	34,000 kl	-4,000 kl	88.2
NOx	12,296 kg	11,651 kg	645 kg	105.5
SOx	600 kg	586 kg	14 kg	102.4

Table-11-5: **Eatsia** / Other Environmental Loads

	2004	2003	Rise and fall	2004 / 2003 %
Water	722,000 kl	640,000 kl	82,000 kl	112.8
NOx	10,498 kg	9,857 kg	641 kg	106.5
SOx	3,982 kg	3,594 kg	388 kg	110.8

Table-11-6: **KFI** / Other Environmental Loads

	2004	2003	Rise and fall	2004 / 2003 %
Water	636,000 kl	644,000 kl	-8,000 kl	98.8
NOx	7,571 kg	14,873 kg	-7,302 kg	50.9
SOx	0 kg	48 kg	-48 kg	0.0

Table-11-7: **KSP** / Other Environmental Loads

	2004	2003	Rise and fall	2004 / 2003 %
Water	73,000 kl	67,000 kl	6,000 kl	109.0
NOx	1,649 kg	1,586 kg	63 kg	104.0
SOx	265 kg	244 kg	21 kg	108.6

Table-11-8: **KFE** / Other Environmental Loads

	2004	2003	Rise and fall	2004 / 2003 %
Water	43,000 kl	48,000 kl	-5,000 kl	89.6
NOx	1,728 kg	1,747 kg	-19 kg	98.9
SOx	0 kg	0 kg	0 kg	—



## Independent Review Report

### TRANSLATION

#### Independent Review Report on “Kikkoman Group Sustainability Report 2005”

Mr. Takashi Ushiku  
President and Chief Operating Officer  
KIKKOMAN CORPORATION

1. Purpose and Scope of our review

We have reviewed the “Kikkoman Group Sustainability Report 2005” (the “Report”) of Kikkoman Corporation and its principal subsidiaries (the “Company”) for the year ended March 31, 2005 by performing certain procedures agreed to by the Company. The Company is responsible for the preparation of the Report. Our responsibility is to perform review procedures, which are described below, in relation to the environmental performance data, the environmental accounting data presented in the Report, and to report the findings from an independent point-of-view.

Our work does not constitute an audit. We therefore do not express an audit opinion on the Report.

2. Procedures Performed

We have performed the following procedures agreed to by the Company.

- 1) Reviewed the Company’s process and procedure for collection, compilation and calculation of the environmental performance data and the environmental accounting data.
- 2) Obtained evidences and related documents supporting the environmental performance data and the environmental accounting data presented in the Report and reviewed the accurateness of the calculations of such data on a sample basis.
- 3) Conducted on-site inspections of the Company’s factories and subsidiaries, which were selected on a sample basis, made inquiries to the personnel responsible for reporting and reviewed related documents such as a request for managerial decision.

3. Results of the Procedures Performed

As a result of the procedures performed, we were not aware of any material modifications that should be made to the environmental performance data and the environmental accounting data presented in the Report, as they were collected, aggregated and presented in compliance with the Company’s policy.

4. Independency of the reviewer

We satisfy the independency requirements defined in the Certified Public Accountant Law, the ethics regulation of the Japanese Institute of Certified Public Accountants and the ethics procedures of our firm.

Shin Nihon & Co.  
Representative Partner Michio Shibuya  
June 10, 2005

Partner Akihiro Nakagome

NOTE:

The above Independent Review Report was prepared based on the original Japanese version.

## Statement of Views

### Comments by Shin Nihon & Co.

In addition to the results of our review as mentioned in the report, we would like to mention the following points that we took note of in the process of our review for reader's reference.

#### (Notable Features)

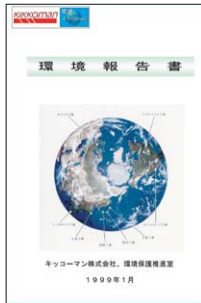
1. The Kikkoman Group has been making efforts to enhance the recycling and reusing rates of wastes and byproducts, and the major production department in Japan have achieved the targets to be achieved by 2005 one year ahead respectively. It is highly evaluated, in particular, that the Group is seeking to reuse wastes and byproducts with commercial values as part of its efforts to build a resource cyclical society.
2. In an effort to become a company whose existence is meaningful to the global society, the Kikkoman Group is conducting environmental preservation activities and environmental education in all major affiliate corporations. The Group is expanding its scope of activities such as acquisition of ISO 14001 certification throughout the domestic branches and factories and the promotion and sharing of their Environmental Accounting standards. The activities of the Kikkoman Group cover a wide range embracing environmental preservation activities and social contribution activities.
3. Based on its management philosophy to promote the international exchange of food culture, the Kikkoman Group organizes a seminar on "food culture" and other events to offer knowledge, information and experience useful for people to live healthy lifestyles and enjoy enriched diets. In this way, the Kikkoman Group is performing its social responsibility as a corporate group in the food industry.
4. The Kikkoman Group is trying to establish its corporate governance system in order to cope appropriately to the changing business environment, and to fulfill its corporate responsibility to all stakeholders. It also set up the Corporate Social Responsibility Committee and began to study ways to fulfill the Group's corporate responsibilities in management, the environment and society.

#### (Points for Future Consideration)

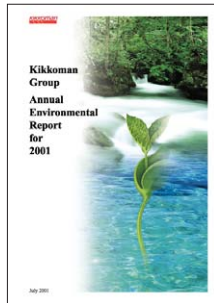
1. There seemed to be gaps in understanding the Environmental Accounting system among the corporations and factories targeted for Environmental Accounting. Because of this, there exist gaps in accuracy in environmental accounting data provided by them. Environmental Accounting presents indicators to inform concerned parties of the Group's involvement and programs for environmental problems as part of its business operations. In order to help all the members of the Group understand the Environmental Accounting system, it is desired that its status and role in the Kikkoman Group and the meaning of indicators be reconsidered, and the result be made known to all concerned.
2. The Kikkoman Group is conducting various programs to realize a sustainable society. As a result, employees at each workplace are required to initiate new activities on top of what they have been doing. As a future task, the importance of each activity, priority activities, and consistency as a whole should be reviewed. While accurately catching the trends of society, it is desirable that balance between expanding and deepening activities should be kept. From this perspective, there are great expectations regarding the work of the Corporate Social Responsibility Committee.

## For Inquiry

The original version of the Kikkoman "Environmental Report" was first published on the Internet in 1998 (left). The Environmental Report had been renewed annually until 2000, after which the Kikkoman Group "Environmental Report" has been published containing the environmental preservation reports of 8 corporation of the Group including major corporations and overseas subsidiaries (center). Furthermore, beginning in 2004, the Environmental Report was changed into the Kikkoman Group "Sustainability Report" covering the managerial, environmental and social activities of the Group (right).



● Kikkoman  
"Environmental Report" (1998)



● Kikkoman Group  
"Environmental Report" (2001)



● Kikkoman Group  
"Sustainability Report"(2004)



Cherry blossoms in Shimizu park.

*Doing what we can for the future*

### We are waiting for your comments and inquiries

Thank you very much for accessing the Kikkoman Group Sustainability Report 2005. Please contact the Environment Department of Kikkoman Corporation for further inquiries and comments.

### Kikkoman Group Sustainability Report 2005

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