



# **“Visualization” of Environmental Information**

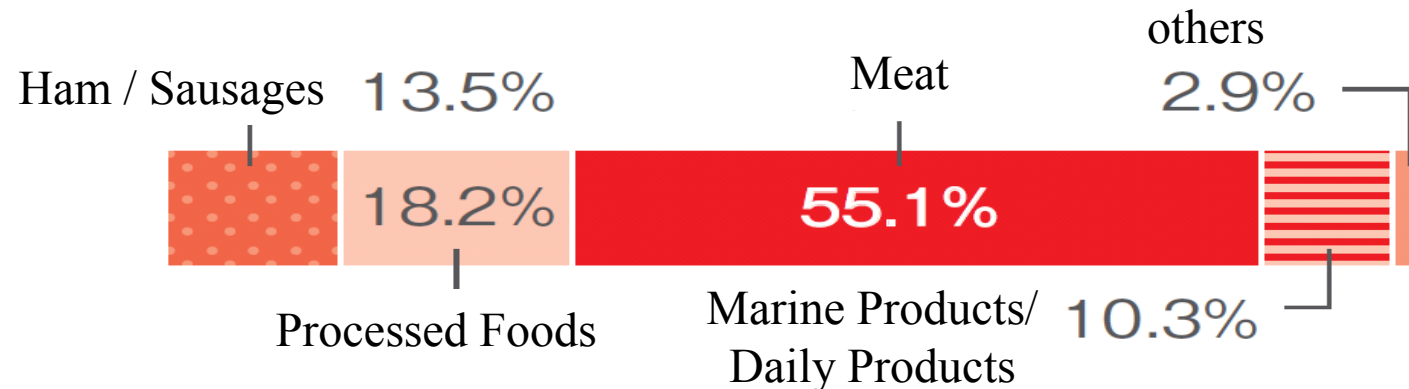


**Nippon Meat Packers, Inc.  
Environment & Social  
Responsibility Office**

# Nippon Ham Group Overview

【Established】	May 30,1949
【Capital】	24,166 million JPY ( as of March 31,2009 )
【Sales】	1,028,449 million JPY ( March 2009 consolidated )
【Offices】	Factories 95 Sales Offices 331 ( September 2008 consolidated ) Research Labs 2
【No. of Employees】	28,637(as of March 2009 consolidated basis, -includes part-time and temporary employees)

## 【Sales Revenue Composition Ratio by Product】 (March 2009 consolidated)



# Nippon Ham Group Business Domains

Beginning from the making of ham and sausage, the Group has since broadened its business to include numerous processed foods, marine products, dairy products, vegetables, and other items, for a rich variety of foods and products for the dinner tables of our customers. As we move into the new future of foods symbolized by health foods, we intend to add the elements of fun, joy, and health to that of flavor in our business.





# Some of Nippon Ham Group's products and services





# Environmental Declaration



**The environment is one of the most critical issues we face as we enter the 21st century.**

**We live in an affluent society, enjoying the blessings of the Earth's natural environment together with the benefits of modern civilization. In order to sustain our affluence, however, we are harnessing, consuming and destroying natural resources and energy in vast quantities. We are all now aware of global warming, acid rain, ozone depletion and other world-scale environmental problems that are putting the survival of the human race in jeopardy.**

**It is imperative that we take environmental factors into account in both our business activities and daily lives. We must leave our planet clean and beautiful for our children.**

**Applying the basic concept of “Producing Foods that Bring Happiness”, Nippon Ham Group has worked to expand relationships globally and contribute to the health and happiness of people all over the world.**

**Addressing environmental issues is something that we consider both our responsibility and our mission as a corporate entity. Respect for nature and realization of harmony and compatibility with the environment in our business activities are hereby proclaimed as part of Nippon Ham Group's operational priorities.**

**We encourage each and every one of our employees to deepen their understanding of environmental issues and to exercise greater care for the environment both at work and at home.**

**Nippon Meat Packers, Inc.**

**April, 1998**



# Environmental Charter

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## Philosophy

**The Nippon Ham Group appreciates the blessings of nature and we consider it our responsibility to leave a beautiful planet to the next generation. We will take pains to preserve the environment in every aspect of our corporate activities.**

## Guidelines for Conduct

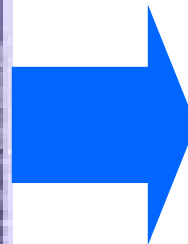
**Each one of us will study and deepen our understanding of environmental problems and practice "global harmony" in every aspect of our business processes.**

- 1. We will take pains to develop products and services that are attentive to the issues of safety and environmental conservation.**
  - 2. We will strive to conserve energy and resources and to reduce the burdens affecting the environment.**
  - 3. We will make efforts to organize and promote projects, enhance our consciousness and strengthen environmental control systems.**
  - 4. We will work to set up our own criteria for enhancing the level of environmental preservation to fulfill both the letter and the spirit of the related laws.**
  - 5. We will take pains to cooperate in establishing harmonious relationships with our local communities through our corporate activities in order to protect the environment.**
-

# The challenge of reducing packaging – 1

We wondered whether there was a way to reduce packaging while still meeting the primary requirements of packaging function (preservation of freshness, maintaining product shape, etc.)

## “Ishigama Kobo” brand French Bread Pizza



**Eliminated tray: reduced packaging by around 10g**

**Reduced wrapping film: Made wrapping film smaller, saving around 2g**



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# The challenge of reducing packaging – 2

## “Mori no Kaori” Roast Ham, Ham and Bacon



**Wrapping film reduced by 16%**



**Wrapping film reduced by 10%**

**\*Reduction percentages in comparison with prior equivalent Nippon Meat Packers, Inc. products.**

# Business activities and environmental burden (FY2008, within Japan)



Electricity: 559 million kwh



Water: 12 million cubic meters



Fuel: 73,000 kl



Vehicle fuel: 14,000 kl



Corn, wheat and other feedstuffs 630,000 tons

Products:

665,000 tons



Greenhouse gas emissions  
610,000 tons

Waste generated from  
packaging and wrapping

Plastic: 10,063 tons

Paper: 1,211 tons

Bottles: 1,598 tons

PET bottles: 2.8 tons

Waste

Total output 722,000 tons

Quantity disposed of: 13,000 tons

Quantity recycled: 708,000 tons

Wastewater: 9 million cubic meters

# How about my workplace? Our products?

Our collated and published “Environmental Burden Level” includes a significant amount of data from the group as a whole, or from different individual businesses added together.

Here are some simple questions:

How can we reduce our waste output by changing our operations?

What influence does changing our packaging actually have?

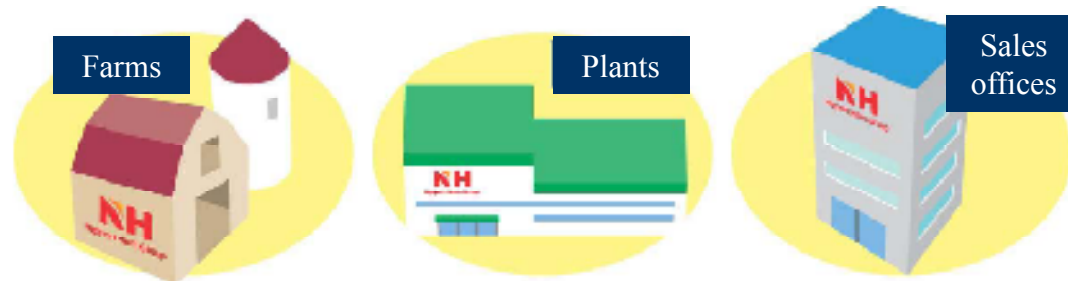
How much is our environmental burden reduced by if we drive in an environmentally friendly way?



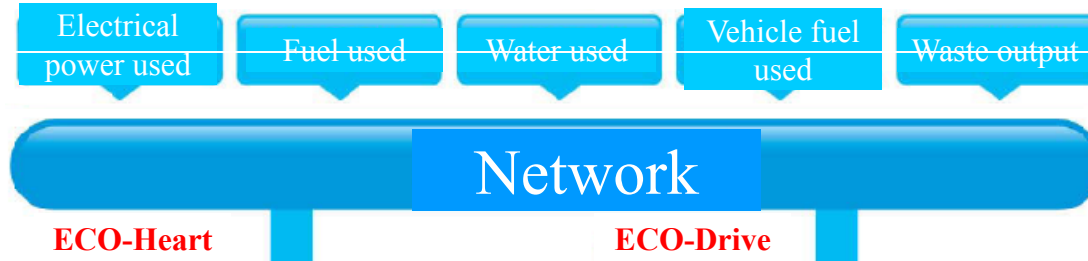
**It is important to “visualize” the results (fruits) of our activities in much smaller units, categorized by different operations and products.**



# “Visualizing” environmental information from each of our workplaces



Staff at each of our workplaces record monthly energy use, waste output and vehicle fuel use volumes, and enter them into a database.



ECO-Heart

区分	品名	単位	1月	2月	3月	4月	5月	6月
電力	照明	kWh	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
	空調	kWh	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
	冷蔵庫	kWh	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
	洗濯機	kWh	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
燃料	灯油	kg	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
	重油	kg	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
	LPガス	kg	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
	石炭	kg	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

ECO-Drive

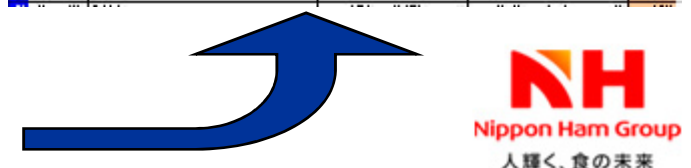
区分	品名	単位	1月	2月	3月	4月	5月	6月
乗用車	軽自動車	km	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
	普通車	km	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
	トラック	km	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
	バス	km	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
トラック	軽トラック	km	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
	普通トラック	km	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
	大型トラック	km	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00
	バス	km	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00	1,000.00

Data input into the database and collated, to calculate levels of improvement and emissions quantities

This is a screenshot of a Japanese spreadsheet titled '【日本ハムグループ CO2排出量】' (Nippon Ham Group CO2 Emissions). It displays monthly data for various departments, including energy consumption and waste output. The data is organized in columns for different months and rows for different departments.

【2009年度 全グループ環境報告書】

This is another screenshot of a Japanese spreadsheet, likely a continuation of the one above, showing monthly data for various departments. It includes columns for different months and rows for different departments, detailing energy consumption and waste output.



# “Visualizing” environmental information for our products

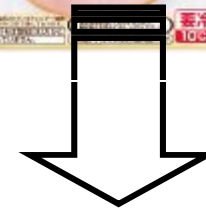
## Ecoleaf

### Product Environmental Aspects Declaration



Calculation of environmental burden involved in delivering beef reared in Australia to stores.

## Carbon Footprint



Carbon Footprint of Products Pilot Project  
<http://www.clp-japan.jp>  
Verification ID: CV-AJ-005



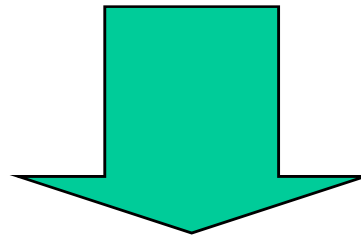
Carbon Footprint of Products Pilot Project  
<http://www.clp-japan.jp>  
Verification ID: CV-AJ-001

# The challenge of Life Cycle Assessment (LCA)

FY2007

Ecoleaf project

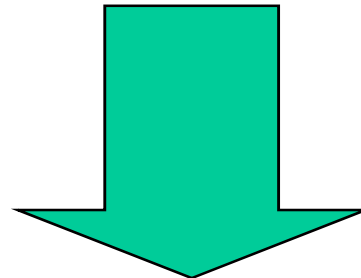
We implemented PCR specification for beef under the environmental labeling “Ecoleaf” system. We subsequently carried out calculations for Australia-reared beef, which became the first food product to achieve the Ecoleaf accreditation.



FY2008

CFP trial calculation project

We participated in the Study Group for Development and Promotion of CFP Program and began working towards displaying products featuring CFP calculations at the Eco-Products 2008 Exhibition ( ham, sausage and pizza).



FY2009

CFP labeling on products

Based on our research activities during FY2008, we began activities with the intention of applying the principles of the “Carbon Footprint of Products Pilot Project” to ham and sausages. At the November committee meeting, PCR approved, and subsequently continued with our CFP calculations. We were given permission to use the CFP mark from January 2010. (Applicable products: Mori no Kaori wiener sausages and roast ham)





# The challenge of “Ecoleaf”-1



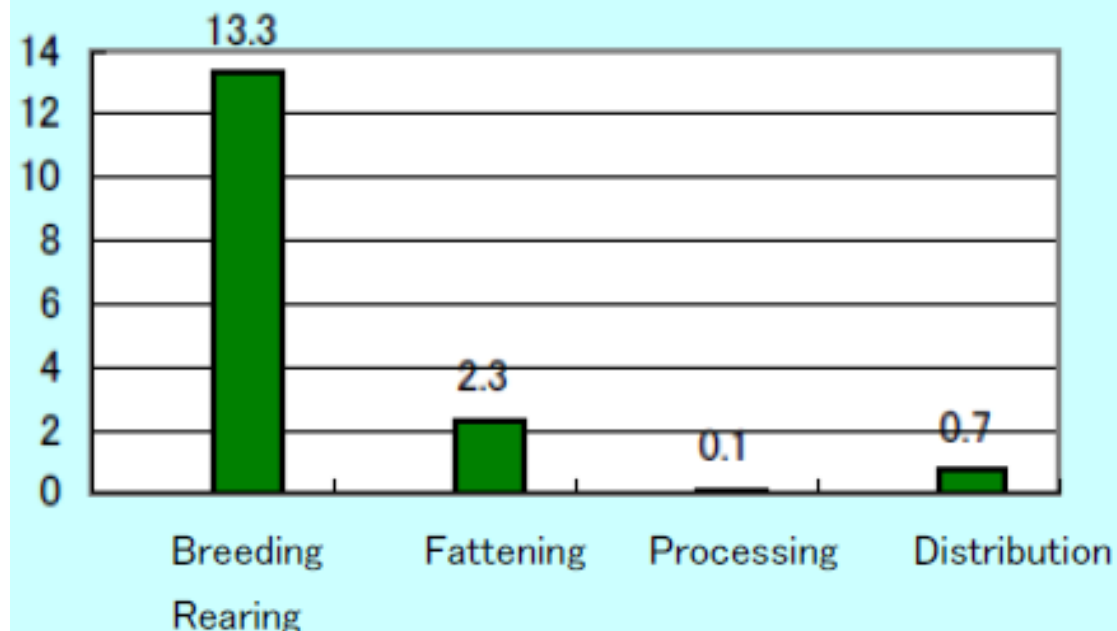
## Product Environmental Aspects Declaration

Beef (PSC No. CP-01)

Per 1kg of Australia-reared beef

Consumption and discharge in a life cycle	All the stage sum totals
Global Warming(CO <sub>2</sub> equivalent)	16.4 kg
Acidification(SO <sub>2</sub> equivalent)	0.003 kg
Energy resources(crude oil equivalent)	15.7 MJ

Warming load CO<sub>2</sub> equivalent of each stage (kg)



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# The challenge of “Ecoleaf”-2

During the process of gathering calculation data, we learned a lot about what sort of data to collect from where, and how to collate it. We also learned which of our processes had particularly large environmental burdens.

## 2. 製造ステージ情報

### (1) 繁殖・育成ステージ情報(牛肉1kg当たり)

・SOx, NOx量は、それぞれSO<sub>2</sub>, NO<sub>2</sub>換算値。

消費	区分	エネルギー	エネルギー	エネルギー	エネルギー				
	内訳項目	電力(kWh)	ガソリン(kg)	燃料用軽油(kg)	燃料用軽油(kg)				
	量	2.06E-02	9.01E-03	1.52E-02	4.30E-03				
	説明		車両	車両	物流				
排出	区分	大気	大気	大気					
	内訳項目	CH <sub>4</sub>	CH <sub>4</sub>	N <sub>2</sub> O					
	量	6.08E-01	9.63E-03	9.68E-04					
	説明	反芻	糞尿	牧草					

【解説】

### (2) 肥育ステージ情報(牛肉1kg当たり)

消費	区分	エネルギー	エネルギー	エネルギー	エネルギー	エネルギー	エネルギー		
	内訳項目	電力(kWh)	燃料用石炭(kg)	ガソリン(kg)	燃料用軽油(kg)	燃料用軽油(kg)	燃料用軽油(kg)		
	量	6.82E-02	3.58E-02	3.27E-04	8.63E-03	9.79E-03	1.89E-03		
	説明			車両	車両	飼料	物流		
排出	区分	大気	大気	大気					
	内訳項目	CH <sub>4</sub> (kg)	CH <sub>4</sub> (kg)	N <sub>2</sub> O(kg)					
	量	6.18E-02	3.92E-03	2.77E-03					
	説明	反芻	糞尿	糞尿					

【解説】

※For further details, please see the Japan Environmental Management Association for Industry (JEMAI) website.

# The challenge of Carbon Footprint – 1

## Creation of draft proposal for PCR (Product Category Rules)

**February 2009:** We applied to the FY 2008 project for supporting voluntary WG in trial PCR development and began working on draft PCR proposals for our ham and sausages.

**August – October 2009:** We submitted the Application for Registration of Draft PCR Development Plan. Under instruction from JEMAI (the Japan Environmental Management Association for Industry), we began to define PCR draft proposal.

**November 2009:** PCR for ham and sausages was approved.

**During the definition of draft PCR, we found it is important to consider the following, and to “calculate” them where possible:**

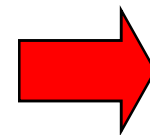
- 1) What factors are significant in the overall life cycle**
- 2) What data can be collected and what is difficult to collect for calculation of CFP**
- 3) How we guarantee the appropriateness of the scenarios we create**



# The challenge of Carbon Footprint – 2

## Calculating CFP

- 1) Confirm the approved PCR, and collect basic data required for calculations.  
Suppliers of raw materials, energy use and waste output from manufacturing plants, product destinations, weights of packaging film and cardboard...
- 2) Collage these into the application form for CFP calculation & labeling method verification. Confirm validity period of collected data, sources and calculations.  
\*Needs to be checked by several people in-house before submission.
- 3) Pre-verification  
CFP verifier will check the contents of your application. Since the verification period is short, it is necessary to respond quickly.
- 4) Verification  
If your application is considered “appropriate”

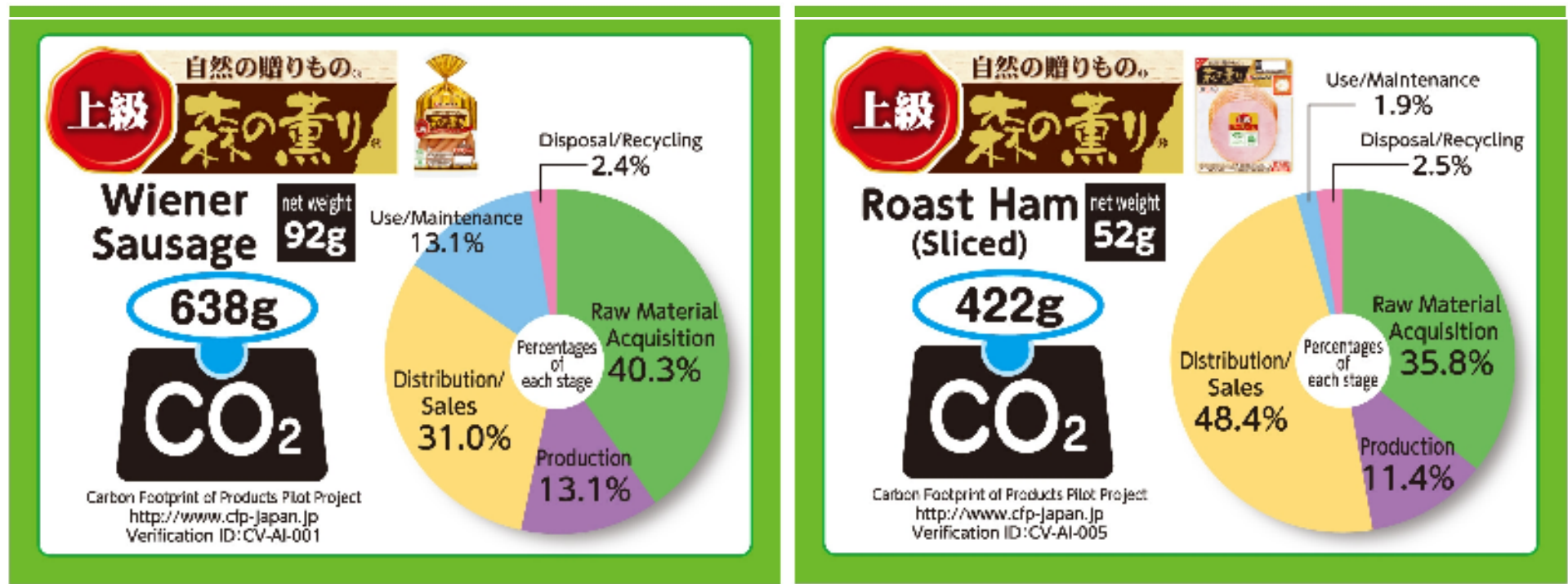


**Products can be  
labeled with CFP**

# The challenge of Carbon Footprint – 3

Displaying CFP mark on products, and supplying more detailed information

Detailed information was displayed on the Carbon Footprint Home Page on 14th January, and the CFP mark began to be displayed on wiener sausage and roast ham. We began retailing these products on 1 February.



# The challenge of Carbon Footprint – 4

## Giving our customers more detailed information

Alongside the relaunch of these products, we opened up a website accessible from mobile phones, which gives customers further information about Carbon Footprint.

High-class "Mori no Kaori" roast ham 52g



The total CO<sub>2</sub> emitted by the product, from the production of raw materials through to the disposal/recycling of packaging, etc. is displayed as its Carbon Footprint.

### CO<sub>2</sub> emissions at each stage

- (1) CO<sub>2</sub> emitted in the procurement of raw materials: 151g
- (2) CO<sub>2</sub> emitted during the production of the product: 48.1g
- (3) CO<sub>2</sub> emitted during the process of transportation for sale: 204g
- (4) CO<sub>2</sub> emitted during the storage of the product: 7.69g
- (5) CO<sub>2</sub> emitted during the disposal of waste: 10.3g

Further details are available on the Carbon Footprint Website (<http://www.cfp-japan.jp/calculate/verify/permission.html>)



A QR code is displayed on the product.

# Our future challenges



**As we press ahead with our business, we have to think about how far we can further reduce our environmental burden, and what measures to take in order to do this.**

**We are using the Carbon Footprint principle as one quantified indicator for this.**

**Can we construct more highly efficient production lines?**

**How should our products be packaged?**

**How should we transport our products?**

**.....**

**Consider what visualization has shown us and  
what it has enabled us to do.  
Then act.**



# Environmental Charter



## Philosophy

The Nippon Ham Group appreciates the blessings of nature and we consider it our responsibility to leave a beautiful planet to the next generation. We will take pains to preserve the environment in every aspect of our corporate activities.

## Guidelines for Conduct

Each one of us will study and deepen our understanding of environmental problems and practice "global harmony" in every aspect of our business processes.

1. We will take pains to develop products and services that are attentive to the issues of safety and environmental conservation.
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5. We will take pains to cooperate in establishing harmonious relationships with our local communities through our corporate activities in order to protect the environment.

# Thank you for listening.



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