Creating New Value for Customers

Related SDG goals

» Health-related Activities

Meat Production: Focus on Omega-3 Fatty Acids

Amani no Megumi Meat

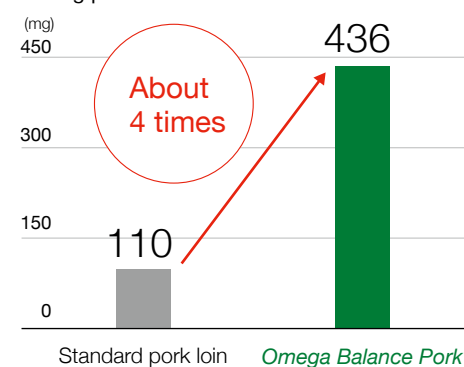🌐 http://www.goodbalancemeat.jp/ (Japanese only)

Nichirei Fresh produces and sells meat with a focus on omega-3 fatty acids, which are essential for human health. We have improved the balance of omega-3 and omega-6 fatty acids by giving chickens, pigs and cattle* a formula feed that uses ingredients derived from flax, which is rich in α-linolenic acid. As a result, we have developed tender meat that we have been selling since 2006.

Omega-3 fatty acids, abundant in blue-backed fish, flaxseed oil and wild sesame oil, are converted into eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) in the body. However, the diet of today's Japanese is often lacking in the essential fatty acids that cannot be made in the body, especially omega-3 fatty acids. Thus, Nichirei Fresh is helping support the health of its customers through the meat that appears frequently in everyday meal settings.

* There are individual differences.

あ ま に
亜麻仁の恵み® 豚

■ Comparison of amount of omega-3 fatty acid (α-linolenic acid) that body can absorb from 100g pork loin

About 4 times

(mg)
450 — 436
300
150
110
0

Standard pork loin | *Omega Balance Pork*

Source: Nichirei Fresh

Health through Nutrition

Composition-Controlled Foods

🌐 https://wellness.nichirei.co.jp/shop/default.aspx (Japanese only)

Carbo-hydrate | Salt | Fat | Calorie

Since 2004, Nichirei Foods has been selling, by mail order, side dishes and rice that are not only calorie-controlled but also contain controlled levels of salt, fat and carbohydrate.

We have a registered dietitian in the company and offer meal consultations over the phone, thereby providing customers with the opportunity to easily manage their health.

Kikubari Gozen nutrition composition-controlled foods

Companion Diagnostics

Provision of diagnostics for personalized cancer treatments

🌐 https://www.nichirei.co.jp/news/2018/321.html (Japanese only)

In 2014, Nichirei Biosciences became the first Japanese company to manufacture and sell "companion diagnostics", which are used to select treatments and drugs eligible for each patient with cancer in terms of their physical condition and pathology.

Furthermore, immune system-related technologies that we have developed so far are contributing to the advancement of personalized medicine that enables the selection of treatments and drugs that are highly effective and have few side effects.

Histofine ALK iAEP® Kit

» Initiatives for Innovation

### Food Waste Reduction

AI-powered diagnostic technology

🌐 https://www.nichireifoods.co.jp/news/2018/info_id5715/ (Japanese only)

In February 2018, in partnership with Kindai University, Nichirei Foods developed technologies powered by artificial intelligence (AI)[1].

We maintain and control the quality of the ingredients for processed chicken products as we receive them, by using sorting technologies, such as metal detection, X-rays, near-infrared rays, optics and colors.

However, since the accuracy of these methods in distinguishing the quality of ingredients decreases depending on the position and angle of the foreign matter and impurities,[2] additional manual or visual inspection is often required.

In the selection of the ingredients for cuts of chicken, in particular, the three major impurities that must be eliminated are bones, feathers and bloodstains. Due to its ability to locate such impurities with pinpoint accuracy, AI-powered technology does not remove unnecessary amounts of impurity-free meat, leading to reduced food waste.

Bloodstains

Bruising
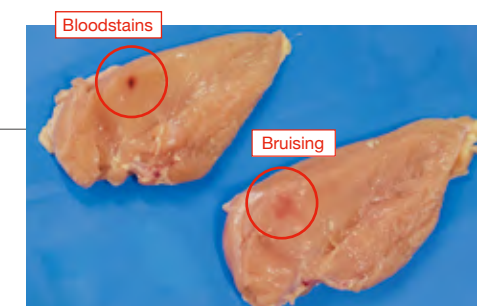
Notes:1. Artificial Intelligence (AI) is the simulation of human intelligence processes by machines, especially computer systems. The computer programs used can understand human language, make logical inferences and learn from experience.
2. Impurities, the parts from the ingredients that are not normally edible, in the case of chicken referring to bones, feathers, etc.
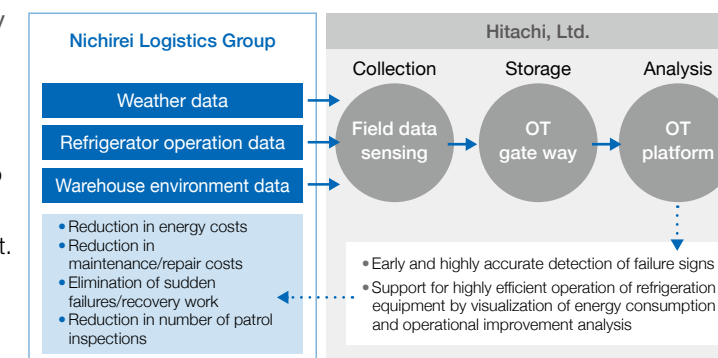
Using the IoT to Save Energy, Pass on Skills

Predicting refrigeration failures, saving energy

🌐 https://www.nichirei.co.jp/sites/default/files/inline-images/english/csr/pdf/csr2018.pdf#page=21

In September 2018, the Nichirei Logistics Group worked jointly with Hitachi, Ltd. to install a system to predict refrigeration equipment failures using the IoT and to improve the operating efficiency of equipment.

This will allow operations and maintenance to be more efficient, while helping to overcome the shortage of skilled engineers and save energy.
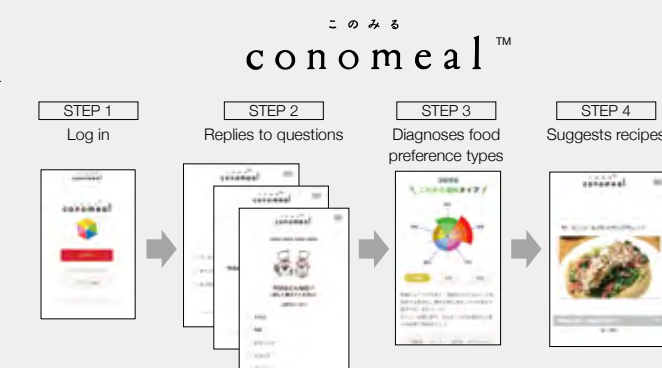

Nichirei Logistics Group

Weather data
Refrigerator operation data
Warehouse environment data

• Reduction in energy costs
• Reduction in maintenance/repair costs
• Elimination of sudden failures/recovery work
• Reduction in number of patrol inspections

Hitachi, Ltd.

Collection | Storage | Analysis

Field data sensing | OT gate way | OT platform

• Early and highly accurate detection of failure signs
• Support for highly efficient operation of refrigeration equipment by visualization of energy consumption and operational improvement analysis

Technology for Personalized Flavor

🌐 https://www.nichirei.co.jp/newbiz/biz002/ (Japanese only)

We are developing a program that gives flavor recommendations to make people's selection of food more enjoyable. The associated service will commence in 2020.

The program uses the Nichirei Group's *MS Nose* proprietary technology, which measures retronasal aroma[1] which is a key element of flavor.

It also uses psychometrics,[2] the design and interpretation of tests that measure psychological values. Using technology to find flavors that one likes enables one to enjoy food better and represents an added value that has not previously been available.

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conomeal ™

STEP 1 Log in | STEP 2 Replies to questions | STEP 3 Diagnoses food preference types | STEP 4 Suggests recipes

* Since the screen is still under development, the display results, etc. may change.

Notes: 1. The sense is stimulated when aroma moves from the mouth to the olfactory receptors.
2. Technology developed in collaboration with the Faculty of Science and Engineering, Chuo University.