Quality Assurance Report

March 21, 2016 to March 20, 2017

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Director’s Greetings on Publication of the Fiscal 2016 Activity Report

Takahiro Yabuta
Operating Officer, Quality Assurance Div.

In fiscal 2016, we focused on quality risk management, which would support development and improvement of CO·OP products. In addition to further reinforcement of product inspection and factory audit, we have also introduced a contact management system that can be shared nationwide to further improve speed and effectiveness of the process to handle complaints from members, from receive to investigation and responses.

Japanese Consumers’ Co-operative Union (JCCU) has a role not only for safety and quality of CO·OP products but also for food safety in Japanese society. In fiscal 2016, we actively submitted our opinions on food labeling to government agencies. We also worked with our business partners and other distribution companies to develop new food safety management standards in order to improve safety of domestic food production.

We are also developing partnerships with member co-ops nationwide in such efforts as product inspection, factory audit of business partners, complaint handling, and development of quality management staff. While this report introduces JCCU’s initiatives and their results, we also include information on collaboration with member co-ops nationwide. I hope you find this report helpful in understanding quality assurance by the entire co-op community.

Quality Assurance Structure in JCCU
Quality Assurance System of CO·OP Products

As of April 2017, CO·OP products are 4,962 items from 1,291 factories of 625 companies. JCCU controls the quality of each product from product design to delivery to members, based on its own quality and safety management system. Control points are set for “Product designing”, “Raw material management”, “Test and first production”, “Product manufacturing” and “Delivery to members” respectively to confirm the quality through raw material inspection, factory audit and product inspection.

When received an inquiry or a complaint about a product, package labeling and/or product specification is reviewed and cause of problem is analyzed to improve product quality and prevent accidents. In case a serious accident happened, JCCU will respond in cooperation with its member co-ops nationwide.

JCCU Quality Assurance Division not only assures the quality of CO·OP products but also engages with the quality assurance of the entire co-op as a federation. As an organization with both sides of consumer and business, JCCU gets actively involved in administrative measures and policies, food safety administration.
Product Inspection

Since its establishment in 1973, JCCU Laboratory has scientifically demonstrated the quality of CO-OP products and supports the commodity business in order to deliver safe and secure CO-OP products to members. In fiscal 2016, the Laboratory conducted 21,811 tests. The number of tests at development showed significant growth due to development of new products and renewal of existing products for brand renovation. The Laboratory also strived to provide data for quality improvement by linking research on pre-development products, tests at development and tests of existing products.

Figures and facts 2016

<table>
<thead>
<tr>
<th>Type of test</th>
<th>Main purpose of the test</th>
<th>No.of Tests</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>At development</td>
<td>Nutrition analysis (to decide Nutrition indication), to evaluate sanitary control, allergen control of the factory, to confirm safety of raw material</td>
<td>7,323</td>
<td>33.6%</td>
</tr>
<tr>
<td>Existing products</td>
<td>To confirm the product in accordance with the specification, to find disorder of control</td>
<td>6,649</td>
<td>30.5%</td>
</tr>
<tr>
<td>On receiving complaints</td>
<td>To judge hazard to human from the product, to identify material of cause of off flavor and foreign material</td>
<td>5,883</td>
<td>27.0%</td>
</tr>
<tr>
<td>Survey &amp; research</td>
<td>To research change by time of nutrition and microorganisms, to survey products in general</td>
<td>1,368</td>
<td>6.3%</td>
</tr>
<tr>
<td>Other</td>
<td>As per inquiry from member co-ops, Merchandising Dept., etc.</td>
<td>588</td>
<td>2.7%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>21,811</td>
<td></td>
</tr>
</tbody>
</table>

Inspection is conducted according to purposes

- **Product inspection**
  - At development: 7,295 (FY 2014), 6,491 (FY 2015), 7,323 (FY 2016)
  - Existing products: 7,575 (FY 2015), 6,665 (FY 2016)
  - On receiving complaints: 7,323 (FY 2016)
  - Survey & research: 6,273 (FY 2014), 4,351 (FY 2015), 5,883 (FY 2016)
  - Other: 1,500 (FY 2014), 4,351 (FY 2015), 1,736 (FY 2016)

- **Items inspected**
  - Food additives 4%
  - Nutrition 5%
  - Net weight 8%
  - Quality control items 9%
  - Microorganisms 21%
  - Pesticide residues 13%
  - Off-flavors 12%
  - Allergens 10%
  - Radioactive materials 12%

**Collaboration with member co-ops nationwide**

We work with Product Inspection Centers and Laboratories of member co-ops to share information and the latest trends as well as to jointly organize workshops and training programs. In fiscal 2015, 29 participating co-ops conducted a total of 286,661 tests. Also, in fiscal 2016, 8 co-ops conducted 6,429 joint tests, mainly on refrigerated and frozen foods. While JCCU focuses on inspection of CO-OP products, member co-ops can inspect products ready to be delivered to individual members; we work together to contribute to the business and movement of co-ops that engage in safety and security of the products.

* Including JCCU.

*Over 70 staff members are working on the inspection and related operations at JCCU Laboratory.*
Factory Audit

Management of the factories that actually manufacture CO·OP products is a key to quality assurance. Quality Assurance Department and Merchandising Division cooperate to carry out factory audits. Problems found during the audits will be requested of the corrective action with deadline. After that the implementation of countermeasures will be confirmed.

In fiscal 2016, factory audits were conducted 1,964 times. The number of audits for new registration showed significant growth due to development of new products. Factory audits are conducted based on priority management themes that are set to prevent serious and frequent accidents.

<table>
<thead>
<tr>
<th>Figures and facts 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of audit</strong></td>
</tr>
<tr>
<td>For new registration</td>
</tr>
<tr>
<td>At the first production</td>
</tr>
<tr>
<td>For existing factory</td>
</tr>
<tr>
<td>Raw material and its origin</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

### Factory audit

<table>
<thead>
<tr>
<th>Year</th>
<th>For new registration</th>
<th>At the first production</th>
<th>For existing factory</th>
<th>Raw material and its origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2014</td>
<td>232</td>
<td>687</td>
<td>989</td>
<td>218</td>
</tr>
<tr>
<td>FY 2015</td>
<td>233</td>
<td>577</td>
<td>976</td>
<td>174</td>
</tr>
<tr>
<td>FY 2016</td>
<td>265</td>
<td>623</td>
<td>850</td>
<td>226</td>
</tr>
</tbody>
</table>

### Product categories

- **Household goods**: 5%
- **Marine products**: 19%
- **Daily food, milk**: 19%
- **Processed food**: 15%
- **Frozen food**: 17%
- **Sweets, beverages, alcoholic drinks**: 13%
- **Agricultural and livestock products**: 12%

### Collaboration with member co-ops nationwide

Each member co-op also carries out factory audits, working with us to jointly conduct the audits, to share the results and to improve skills. In fiscal 2016, JCCU revised a system to manage the results of factory audits; this has enabled joint use with member co-ops. The 8 participating co-ops* in the initiative for joint use brought their annual audit plans. When multiple co-ops planned to audit the same factory, they divided the auditing role. We also shared results of the 737 audits. Moreover, we are currently working together to develop and promote an educational material to raise the overall quality level of co-op factory audit.

* Including JCCU.

▲ Observation of production and check of manufacturing management.

▲ Task Force on Joint Factory Audit, sharing auditing cases to improve skills.

Product Inspection/Factory Audit
Assessing Risks in Product Development

When developing a CO·OP product, we identify potential accidents and complaints that can derive from its characteristics then determine what to reinforce in its safety and quality beforehand. We identify risks of the product in terms of not only food safety but also potential deterioration of its smell and taste; then, we reduce each risk before putting the product on the market.

In fiscal 2016, we conducted risk assessments for products imported from Coop Italia and a new series of food products for babies and toddlers. We are promoting activities to prevent product accidents.

### Figures and facts 2016

#### Key points of risk assessment

- Taking measures against specified microorganisms, chemical substances, foreign materials and off-flavors
- Setting use-by and best-before dates based on scientific and reasonable bases
- For ingredients from specified places of production, checking stability of quality as well as origins and breeds
- Checking whether it will lead to an unexpected accident through misuse

#### Risk assessment

![Bar chart showing risk assessment results for FY 2014, FY 2015, and FY 2016 with the highest risk in FY 2014 at 2,092 cases, followed by FY 2015 at 1,724 cases and FY 2016 at 1,740 cases.]

#### Product categories

- Farming and livestock products: 5%
- Daily food and milk: 22%
- Frozen food: 13%
- Marine products: 16%
- Processed food: 17%
- Sweets, beverages, and alcoholic drinks: 16%

#### Topics

**We developed a new series of products for babies and toddlers**

In 2016, we decided to develop frozen foods as co-ops’ unique products for babies and toddlers. There is no management standard for frozen baby foods because baby foods on the market are generally pre-packed products (sterilized with pressure and heat), that are kept at room temperature, or freeze-dried products. We started with identifying requirements for this series, including “What ingredients should we use?”, “How big and how hard should the food be?” and “What about microorganisms and food additives?”

After identifying the requirements for CO·OP products for babies and toddlers, the next steps were to determine product specifications to meet these requirements and to identify manufacturing factories that could make the products at the required quality level in a stable and reliable manner. We re-audited factories, including those of the existing business partners, based on the requirements to manufacture products for babies and toddlers.

Problems with food allergies are frequently expressed as concern particularly regarding food for babies and toddlers. JCCU Laboratory conducts a food allergen test for each production lot to ensure safety to members.
Managing and Inspecting Raw Materials

We ensure safety of raw materials (mainly agricultural, livestock and marine products) by inspecting them before processing as needed, including pesticides and veterinary drugs residue tests.

For a product that focuses on a specific place of production or breed, we develop it after securing stable supply of the raw materials according to its specification. For the ingredients with especially high market value, we reinforce their management as “specially-managed ingredients” to ensure proper handling. For such ingredients, we audited their processing factories and places of production.

<table>
<thead>
<tr>
<th>Auditing factories and places of production of raw materials (specially-managed ingredients)</th>
<th>No. of Audits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditing factories that use specially-managed ingredients for manufacturing</td>
<td>228</td>
</tr>
<tr>
<td>Auditing factories and places of production of specially-managed ingredients</td>
<td>711</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inspecting raw materials (including those not specified as specially-managed ingredients)</th>
<th>No. of Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pesticide residues</td>
<td>383</td>
</tr>
<tr>
<td>Heavy metals</td>
<td>172</td>
</tr>
<tr>
<td>Veterinary drug residues</td>
<td>79</td>
</tr>
<tr>
<td>GMOs (genetically modified organisms)</td>
<td>76</td>
</tr>
<tr>
<td>Others (food additives, natural toxins, allergens, etc.)</td>
<td>205</td>
</tr>
</tbody>
</table>

Management of Imported Products

For imported products, we have set management policies to ensure safety at each step, such as raw materials, manufacturing and processing, storing, and transporting. Based on these policies, we identify risks for each product then conduct inspection and audit.

In particular, since JCCU is the direct importer of the products imported through its subsidiary (CO-OPTRADE JAPAN LTD., CTJ), we engage in detailed controlling and checking.

In fiscal 2016, while we checked the progress of development at monthly quality meetings with CTJ, we collaborated with CTJ’s local staff and Product Department staff to solve issues on individual products. In addition to regular factory audit, we also conducted audit, inspection and checking in order to solve issues as well as to confirm that the situations were solved and stabilized.

Since the quality of imported products depend on the skills of local CTJ staff, we also provided training programs to the staff. We particularly focus on smell because it can lead to a number of complaints. We incorporate our lessons from previous complaints into our preventive measures.

<table>
<thead>
<tr>
<th>Key points of audit</th>
<th>No. of Audits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are products manufactured according to the set rules?</td>
<td>382</td>
</tr>
<tr>
<td>How is the factory managed?</td>
<td>571</td>
</tr>
</tbody>
</table>

▲ At the CTJ Southeast Asia Joint Workshop, we provided training on water that is used at the factories.
The contact information on JCCU Customer Service Office is provided on packages of CO-OP products; the Office takes all kinds of inquiries on products from members across the country, mainly over the phone. Their inquiries are on a variety of subjects, including specifications and design of the product, purchasing, opinions and requests.

In fiscal 2016, the Office received 59,140 inquiries. In order to incorporate their voice into future product development, the Office worked on 15,312 cases of “saving the voice”, in which staff actively listened to the reasons for their questions or opinions as well as what had happened when using the product.

### Figures and facts 2016

<table>
<thead>
<tr>
<th><strong>Responding to inquiries</strong></th>
<th><strong>“Saving the voice”</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2014 (cases)</td>
<td>FY 2015 (cases)</td>
</tr>
<tr>
<td>59,181</td>
<td>56,623</td>
</tr>
<tr>
<td>14,425</td>
<td>12,476</td>
</tr>
<tr>
<td>9,375</td>
<td>8,313</td>
</tr>
<tr>
<td>6,434</td>
<td>6,809</td>
</tr>
<tr>
<td>5,299</td>
<td>5,508</td>
</tr>
<tr>
<td>3,704</td>
<td>4,503</td>
</tr>
<tr>
<td>4,893</td>
<td>4,303</td>
</tr>
<tr>
<td>10,526</td>
<td>10,397</td>
</tr>
<tr>
<td><strong>Expiration dates</strong></td>
<td><strong>Others</strong></td>
</tr>
<tr>
<td><strong>Cosmetics</strong></td>
<td><strong>Design and specification</strong></td>
</tr>
<tr>
<td><strong>Requests for purchasing</strong></td>
<td><strong>Complaints</strong></td>
</tr>
<tr>
<td><strong>How to use</strong></td>
<td><strong>Other than products</strong></td>
</tr>
</tbody>
</table>

### Topics

**Striving to promptly address concerns and questions through enhanced information provision**

Some of the members’ inquiries and complaints are related to characteristics of the product. If members have necessary information, they can feel safer about and promptly handle many of such cases.

If delivery or store staff can immediately answer members’ questions, we should be able to prevent some of the complaints. Customer Care Office makes “Product Naruhodo Sheets” that provide member co-ops with information on characteristics of the products; in fiscal 2016, 12 sheets were newly provided. These sheets are widely used by member co-ops, such as their Quality Management and Product departments, as educational tools and introduced in their magazines and on their websites.

For individual members, we have launched “CO-OP product Q&A” on our website “CO-OP product site”, introducing frequently asked inquiries and questions. In fiscal 2016, 39 cases were updated and 99 new cases were added. The page covers a variety of issues, from general questions to those unique to a specific product. We will keep leveraging this site to actively and directly provide information to members.

△ An example of “Product Naruhodo Sheets”. It provides information as a Q&A dialogue.

△ An example of “CO-OP Product Q&A”. You can search information using categories and key words.
Responding to Complaints

Members sometimes contact us regarding a defect of or a trouble with a CO-OP product; we call such cases “complaints”. Customer Care Office checks all the complained products nationwide, requests their analyses, and provides the results to member co-ops and individual members.

In fiscal 2016, the Office handled 18,949 complaints; the number decreased from the previous year. While focusing on frequent complaints, the Office strives for better product quality by requesting improvement to Merchandising Division.

Figures and facts 2016

Responding to complaints

<table>
<thead>
<tr>
<th>Type of inspection</th>
<th>No. of Tests</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-flavors</td>
<td>2,475</td>
<td>42.1%</td>
</tr>
<tr>
<td>Pesticide residues</td>
<td>2,019</td>
<td>34.3%</td>
</tr>
<tr>
<td>Microorganisms</td>
<td>828</td>
<td>14.1%</td>
</tr>
<tr>
<td>Others</td>
<td>561</td>
<td>9.5%</td>
</tr>
</tbody>
</table>

Inspection of complained products

Product categories

- Marine products 7%
- Processed food 20%
- Daily food, milk 18%
- Frozen food 16%
- Household goods 15%
- Sweets, beverages, alcoholic drinks 14%
- Agricultural and livestock products 10%
- Packages
- Poor condition
- Off-flavors
- Spoilage and mold
- Taste
- Others

By introducing new equipment and innovating methods, we have shortened the time and improved accuracy of quantitative analyses of off-flavors.

Both JCCU Laboratory and our business partners conduct investigation and inspection on all the products that received complaints on an off-flavor. For other complaints as well, we conduct inspection according to their content and situation to identify causes and to make improvements.

Our contact management system “QuickPro II”, which fully launched in fiscal 2016, has been expanded to 11 member co-ops nationwide, in which about 160,000 complaints have been registered. By using a unified system with member co-ops and by sharing information on non-CO-OP products as well, we can obtain information on accidents and respond to each case promptly.

Obtaining the information on a manufacturing factory is essential in responding to accidents. Therefore, we have set shared codes for manufacturing factories of products handled by each member co-op; we have registered 9,292 factories by April 2017.

Task Force to Reinforce Collaboration in Handling Product Complaints and Accidents. It coordinates activities for collaborative information handling.
Based on the lessons from previous product accidents, Safety and Quality Management Department checks all the complaints from members then promptly determines how to handle each of them based on its harmfulness (how harmful it could be for people and goods) and diffusivity (how frequently and widely it could spread). In fiscal 2016, they determined 3,138 cases as urgent and handled them immediately.

The department plays a role as a control tower in case of a serious product accident, giving directions to prevent the damage from spreading, to thoroughly investigate its causes and to take appropriate measures.

### Figures and facts 2016

**Complaints that led to immediate investigation**

- **Details of the 3,138 cases**
  - Off-flavors: 51%
  - Packages: 5%
  - Foreign materials: 17%
  - Others: 22%
  - Poor condition: 5%

**How complaints/accidents are handled**

1. Check the complaint/product
2. Determine the response based on harmfulness/deffusivity
3. Request immediate investigation
   - By the next business day
4. Determine the response based on investigation
   - Increase the level of action
5. Complete the measure

### Topics

**We work on new initiatives to identify causes and build up communication for solution**

Serious product accidents happen because “something” goes beyond what has been expected in raw materials and manufacturing processes and so on. Finding this “something” promptly is the first step for investigation and improvement.

In fiscal 2016, regarding complaints on off-flavors, we tried new methods to identify causes beyond the conventional factory audit.

[Initiative 1] Boneless mackerel

We brought various kinds of test equipment from JCCU to the factory in Vietnam to identify the cause. This effort had led to improvement.

[Initiative 2] Tatsuta-age (Japanese fried chicken)

A lack of methods to analyze off-flavors of food was a hurdle. In response, staff in the manufacturing factory (in Thailand) and JCCU reviewed their inspection methods respectively, sorted out the methods and results, and led these efforts to improvement.

[Initiative 3] Chicken for salad

After the thorough inspection, we have identified an increase in microorganisms as the cause of the off-flavor not related to spoilage. In order to control these microorganisms, we tested a number of different combinations of conditions, such as salinity, moisture and heating; these efforts have led to improvement.

In order to identify the cause of the off-flavor, we brought various kinds of test equipment to the factory.

We tasted the product with members of the manufacturing factory and had a number of discussions.
Examples of Successful Improvement

**Improving the process based on a complaint**

**[Omelette with rice]**

We received a complaint that a small stone had been found in the rice. After the investigation, we found that it had most likely come from rice. We requested the rice manufacturer for more thorough measures to remove foreign materials when polishing rice. We also decided to change packages for protection when shipping the rice to prevent physical agents. These measures have been working effectively.

**Improving the product specification based on an inquiry**

**[Udon noodles with shrimp tempura]**

We received a comment, “I would like to put the shrimp tempura later so that I can enjoy the crispy batter.” We used to put everything together and freeze them, including the shrimp tempura, other toppings and udon. By changing the process to put the shrimp tempura, we were able to separate it from other ingredients. This change has enabled members to cook the shrimp tempura in a microwave separately then put it on top of the udon cooked in a pot.

**Improving the label through product inspection based on an inquiry**

**[Bread]**

We received an inquiry, “Can I keep bread in a freezer?” In order to check how bread would change when kept in a freezer, JCCU Laboratory examined this matter, checked in what way and for how long the product would generally stay in good condition, then added a label on how to keep the product.

**Improving the product before the launch based on product inspection**

**[Meatballs]**

Chicken can contain egg allergens that derive from ovaries depending on its growth stage. Therefore, it may cause egg allergy reactions even without chicken eggs.

When developing meatballs without chicken eggs, we inspected its prototype to check the above matter then detected egg allergens. We checked the details of each ingredient and switched chicken to the one without any egg allergen.
Related Activities

Expanding Public-Private Dialogue on Food Safety

In order for co-ops to contribute to the development of a social system for food safety, we continue to participate in discussion groups of government agencies on the HACCP (Hazard Analysis and Critical Control Point) legislation and the efforts on GFSI (Global Food Safety Initiative). We also take part in board and technical meetings of JFSM (Japan Food Safety Management Association). Through these efforts, we actively work on the development and promotion of new food safety management standards in Japan.

While standards on food safety have existed for a while, there have been challenges for their effective use, such as difficulties to understand due to translation and gaps with Japanese food culture that includes eating raw and fermented food. In response, JFSM has developed 3 standards: C Certification Scheme, which can be used internationally, and A/B programs that give steps for the C Certification. Their operations started in fiscal 2016. We hope our business partners will also use these to respond to the HACCP legislation.

Collaboration with member co-ops nationwide

To promote joint efforts and collaboration

In fiscal 2016, we continued to promote joint efforts and collaboration in quality assurance. In handling complaints, we organized a task force in the board, which operated and solved issues regarding the contact management system “QuickPro II” and developed “Guidelines on Complaint Handling”. Regarding product inspection and factory audit, we organized 2 task forces to promote joint efforts in audit and inspection, to share their results, as well as to develop guidelines and handbooks.

For fiscal 2017, we are striving to further promote joint efforts and networking in quality assurance. We will expand these efforts to staff development in factory audit, product inspection and quality management to further reinforce collaboration among co-ops. To this end, we have decided to dissolve the task force in the board and develop it into “Committee to Reinforce Collaboration in Quality Assurance”. Since existing task forces would be included in the new committee, each task force summed up its accomplishments and developed future agenda.

In each specialized field, we organized gatherings on product inspection, quality management, household goods quality management and complaint handling to exchange experiences and knowledge with relevant staff of member co-ops.

Collaboration among co-ops nationwide for human resource development

In the second mid-term plan of its 2020 Vision, JCCU has “development of human resources who would build the future of co-ops” as one of the priority issues. As part of the efforts in this regard, JCCU and some member co-ops have decided to jointly develop training policies and goals, based on which quality management staff would be seconded for two years for skill development. This program on mutual education started with Co-op CS Net (Federation, Head office: Hiroshima) and Co-op Kinki (Federation, Head office: Osaka).