Japan

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Japan revises safety monitoring on imported grains

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Approved By:
Elizabeth Autry

Prepared By:
Suguru Sato

Report Highlights:
On September 29, 2012, the Government of Japan (GOJ) announced a revision to the quality and safety inspection for imported rice, wheat and barley, which the Ministry of Agriculture, Forestry and Fisheries (MAFF) imports as state trading commodities. MAFF plans to revise the ongoing pesticide residue monitoring based on the situation in the exporting country, and to implement new surveillance of fungal toxin and heavy metal contamination to determine the actual condition of contamination in export countries. MAFF also plans to operate similar surveillance for heavy metal and fungal toxin in domestic rice and processed rice products, taking samples from JFY2011 to 2015. The ongoing pesticide residue monitoring of rice from the United States would remain the same. MAFF is not planning to use the results of fungal toxin and heavy metal surveillance to restrict imports, rather to understand dietary exposure to these substances.
General Information:

Summary
On September 29, 2012, the Government of Japan (GOJ) announced a revision to the quality and safety inspection of imported rice and wheat, which the Ministry of Agriculture, Forestry and Fisheries (MAFF) imports as state trading commodities. The revision consists of two parts: 1) a new surveillance operation of fungal toxin and heavy metal contamination to determine the actual condition of contamination in export countries, and, 2) revision of the ongoing pesticide residue monitoring based on the situation in the exporting country. The ongoing pesticide residue monitoring of rice from the United States would remain the same. The number of chemical substances for the test on imports of wheat and barley will be reduced. MAFF is not planning to use the results of fungal toxin and heavy metal surveillance to restrict imports.

1. New surveillance of fungal toxin and heavy metal contamination in rice and wheat

The primary purpose of this enhanced surveillance is to understand the actual contamination status of rice, wheat and barley by heavy metal and fungal toxin, which currently do not have regulatory limits established in Japan.

Rice
- **Timing of the sampling** – The samples will be collected before MAFF sells minimum access (MA) rice to domestic industry. In general, MAFF purchases MA rice from exporting countries and stores for about 12 months prior to selling to domestic industry.
  - **Items of testing** – fungal flora, fungal toxin (ochratoxin A, deoxynivalenol or DON including acetylated DON, nivalenol or NIV, sterigmatocystin and citrinin) and heavy metals (lead and total arsenic including inorganic form).
  - **Number of samples** – 300 for fungal flora, 100 each for five fungal toxins, 100 each for two heavy metals.
  - **Exporting countries for surveillance** – United States, Thailand, Australia, China and Vietnam.

Wheat and barley
- **Timing of the sampling** – The samples will be collected in the exporting countries and sent to Japan for testing. In the United States, the sample is collected and shipped by USDA/GIPSA, and the test is performed and paid for by MAFF.
  - **Items of testing** – fungal toxin (ochratoxin A, deoxynivalenol or DON, including acetylated DON, nivalenol or NIV, zearalenone and fumonisins) and heavy metals (lead and total arsenic including inorganic form).
  - **Number of samples** – 140 each for five fungal toxin (100 wheat and 40 barley), 140 each for two heavy metals (100 wheat and 40 barley)

Exporting countries for surveillance – United States, Canada and Australia

As the practice is to understand the actual contamination status, MAFF is not planning to use the surveillance results to restrict imports. Regarding Minimum Access (MA) rice, there is a possibility that high fungal toxin levels could be detected, as MA rice is usually stored for about 12 months after purchase. In that case, MAFF will consult with the health authority regarding the handling of the lot in...
question. If they decide the lot with high fungal toxin must not be sold to the domestic industry, the lot will be discarded or directed to non-food purposes. In case of discarding or redirection, the whole cost will be absorbed by MAFF.

2. Revision of the ongoing pesticide residue monitoring

2.1. Rice

In the past, pesticide residues exceeding the MRL were found in rice from countries such as Vietnam, China, Burma and India. MAFF will enhance the monitoring of rice imported from these countries by changing the sampling unit from 1,000 metric tons to 400 metric tons and by requiring all testing prior to loading. The ongoing pesticide residue monitoring of rice from the United States, Thailand and Australia would remain the same. The goal of this revision is to have more stringent monitoring of rice from Vietnam, China, Burma and India, which have a history of chemical residue detection above the Japanese MRLs.

Example of monitoring on 6,000 metric tons of imported rice

1) Current regime (which will continue as is for the United States, Thailand and Australia)
Lot design: [1,000 metric tons] x 6 subsamples
Pre-export testing: 275 chemical substances which do not have registration in Japan; Aflatoxin contamination

    (After passing chemical and aflatoxin tests, the shipment will be exported)

Testing on loading: 315 chemical substances which have registration in Japan.
    The test will be done before arrival at the Japanese port.
On arrival: MHLW’s ordinary inspection for food imports on arrival at the Japanese port.

2) New regime (for Vietnam, China, Burma and India only)
Lot design: [400 metric tons] x 15 subsamples
Pre-export testing: 275 chemical substances which do not have registration in Japan; 315 chemical substances which have registration in Japan; Aflatoxin contamination

    (After passing chemical and aflatoxin tests, the shipment will be exported)

Testing on loading: None (incorporated into pre-export testing)
On arrival: MHLW’s ordinary inspection for food imports on arrival at the Japanese port

If chemical residue in one subdivision is detected at concentrations above the Japanese MRLs, the entire
subdivision of 6,000 metric tons cannot be exported.

2.2. Wheat and barley

There is no precedent for the detection of pesticide levels above Japanese MRLs for wheat and barley that MAFF purchased in the past since the implementation of the Positive List System in June 2006. Also, only 4 percent of tested chemical residue was detected above the Limit of Quantification (LOQ) but below the MRL.

In wheat and barley, MAFF has been operating two different chemical inspections: testing on exports and general surveillance in exporting countries.

Testing on exports is done for each export shipment in order to ensure the safety of each shipment. The test must be done before the shipment is loaded into the carrier. Currently, MAFF tests 175 substances in wheat and 156 in barley before export. After this revision, MAFF plans to reduce the number of chemical substances for export testing to 26 substances in wheat and 19 in barley. The substances deleted from the export testing regime will be incorporated into general surveillance, which is explained below.

General surveillance of chemical substances in exporting countries has been done to understand the actual condition of chemical application and residue levels in exporting countries. The result is used as a reference to select substances for export testing of each shipment. Current surveillance covers 420 chemical substances in wheat and 440 in barley. After this revision, MAFF plans to increase the numbers of substances for surveillance to 569 in wheat and 577 in barley. If a chemical is detected by surveillance, the chemical substance will be re-incorporated into export testing if the substance meets any of the following conditions: 1) detection at a concentration above the MRL; 2) detection at the MRL in which Acceptable Daily Intake (ADI) is not set; or 3) detection at the concentration of 1 percent or more of its ADI.