

## Wild mushrooms far from Fukushima show high levels of cesium

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By MUTSUMI MITOBE/ Staff Writer

Wild mushrooms, a seasonal delicacy in many parts of Japan, have lost their magic.

Tourism industry officials and restaurant operators have been aghast to learn that wild mushrooms picked far from the site of the nuclear disaster in Fukushima Prefecture last year are showing high levels of radioactive cesium.

Last year, only wild mushrooms picked in Fukushima Prefecture were found to have cesium levels that exceeded legal standards.

This year, however, wild mushrooms from as far away as Aomori, Nagano and Shizuoka prefectures, all more than 200 kilometers from Fukushima, have been found to be contaminated with cesium.

The central government has asked 17 prefectural governments in eastern Japan to test wild mushrooms for cesium.

The task is difficult because differentiating types of wild mushroom is not easy. For this reason, it was decided that if even a single mushroom type had more than the legally allowed level of cesium in at least two municipalities in a prefecture, a blanket ban will be imposed on shipments from those municipalities.

Another problem is that decontamination work in mountainous areas is extremely difficult. Because of this, there has yet to be a single case in which a ban has been lifted.

For example, "chichitake" mushrooms picked in Towada, Aomori Prefecture, in October were found to have cesium levels of 120 becquerels per kilogram. Towada is located 350 kilometers north of the Fukushima No. 1 plant.

Under the Food Sanitation Law, the legal standard for cesium is 100 becquerels per kilogram.

The central government issued a shipment restriction and the Aomori prefectural government banned the sale of all wild mushrooms picked in the city, including "nameko" and "kuritake," or brick cap, mushrooms.

A 42-year-old man who works in Towada's tourism industry fretted about the consequences of the ban.

"We are unable to offer mushrooms in tempura or potted stew form that 80 percent of our customers order," he said. "It is taking a heavy toll on business."

He said there are many repeat visitors who crave the opportunity to eat wild mushrooms.

"I also don't want to explain why we can't provide the mushrooms because that could lead to negative publicity that radiation is also a major concern in Aomori," he said.

A variety of mushroom called "sakura shimeji" picked in Aomori city was also found to be slightly in excess of legal standards in October. All fungi picked in Aomori city disappeared from store shelves after the prefectural government issued instructions to halt shipments.

The operator of a grocery store near JR Aomori Station who is also a mushroom researcher decided to stop handling all wild mushrooms regardless of origin.

"Even if I am told the mushrooms were picked outside of Aomori city, I still cannot take responsibility," said Yutaka Tezuka, 61. "I truly regret not

being able to offer this autumn delicacy."

Hoto is a popular dish in Yamanashi Prefecture that combines flat udon noodles with vegetables in stew form.

However, Tenkajaya, a hoto restaurant in the town of Fujikawaguchiko, has removed hoto stew with wild mushrooms from its menu.

The dish matches the autumn tourism season, leading the 70-year-old restaurant owner to say, "While it hurts our business, I am also saddened when I see disappointed tourists who cannot order the dish."

According to the Ministry of Health, Labor and Welfare, Fukushima Prefecture was the only region that was slapped with a shipment restriction for wild mushrooms last year.

One reason for the increase in such restrictions this year is a lowering of the legal standard for cesium from 500 becquerels per kilogram to 100 becquerels.

As of Nov. 16, officials said 93 municipalities in 10 prefectures, including Fukushima, had a shipment restriction in place.

For five prefectures--Aomori, Saitama, Yamanashi, Nagano and Shizuoka--wild mushrooms constitute the only produce for which a shipment ban is in effect.

Cesium levels have also risen in various areas compared with last year.

According to tests requested by the central government, the highest levels recorded this year were 120 becquerels in Aomori Prefecture, up from only 60 becquerels last year; 2,100 becquerels in Nagano Prefecture (1,320 becquerels last year); and 3,000 becquerels in Tochigi Prefecture (134 becquerels last year).

Yasuyuki Muramatsu, a chemistry professor at Gakushuin University who specializes in radiation effects on ecology, said, "While the detailed mechanism is still unclear, mushrooms can more easily absorb cesium in comparison to plants because they are fungi."

As for why cesium levels are higher this autumn, Muramatsu said, "There is the possibility that radioactive materials that were attached to the trunks and leaves of trees last year were washed away by the rain and entered the soil into which mushrooms extend their fungal filament."

Muramatsu cautioned that some types of wild mushroom may have high cesium levels next year as well, which will require continued testing.

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