

[Episode 25] Revitalizing local industries with glutinous wheat

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Do you know “glutinous wheat”, which is made from wheat but has a chewy and moist texture? The Tohoku Agricultural Research Center (TARC) (Morioka City, Iwate Prefecture) developed the world's first glutinous wheat called “Hatsumochi”. The successor variety, “Mochihime” has been used to create a number of branded products that utilize its characteristics, such as premium bread and ramen noodles, contributing greatly to regional development in various regions. The problem is that there are few producers who grow glutinous wheat. Regions and flour milling companies that feel a positive response to demand for their products are strongly calling for the cultivation and production expansion of glutinous wheat.

[Enjoy glutinous wheat at a tourist farm in Oirase Town (Aomori)]

"Agri No Sato Oirase" is a tourist farm located in Oirase Town in the eastern part of Aomori Prefecture. The large farm has a farmer's market, restaurants, orchards, etc., and is crowded on weekends. “Himekko Mochi” (Fig.1) and “Mochi Wheat Flour” are sold at the direct sales store, and bread made from glutinous wheat (Fig.2) is sold at the bread workshop. At the restaurant and produce center, glutinous wheat "suiton (dumplings in soup)" (Fig.3) are also offered. Mochihime is the raw material for these glutinous wheat products. It is grown by 3 local farmers.

Himekko Mochi (frozen product) has gained popularity as it can be used in a wide range of dishes such as dumplings in soup, hot pot, sweet red bean soup, and curry. Glutinous flour can be used for baked goods, fried goods, okonomiyaki, bread, and Western sweets, and is also used in local school lunches. Orders also come from outside the prefecture.

Ten years ago, Ryo Asamizu, who was in charge of the processing, development and publicity of glutinous wheat products at a tourist farm and others received guidance by Shuzo Fujita, professor at Baika Women's University (then professor at Aomori University of Health and Welfare), who was researching the functionality and processability of glutinous wheat and developed unique products such as “Himekko Mochi”, a frozen rice cake made from 100% glutinous wheat. Glutinous wheat has the advantage that it is easy for elderly persons to eat like udon noodles when eaten in the form of dumplings. The sticky gluten and dietary fiber are

digested slowly, so it is also attractive that blood sugars levels after eating do not rise easily. However, there are few producers, and potential growers are desired.



Fig.1
100% glutinous wheat rice cake
"Himekko Mochi" (Provided by "Agri
No Sato Oirase")



Fig.2
Bread made with Mochihime flour
(Provided by "Agri No Sato Oirase")



Fig.3
Suiton with Himekko mochi
(Provided by Aguri No Sato Oirase)

[Birth of premium brand bread in Iwate]

Shiraishi Shokuhin Kogyo (Morioka City, Iwate Prefecture), a bread maker introduced to glutinous wheat by Prof. Fujita, has been producing and selling premium bread using Mochihime as the main ingredient at the bakery "PanoPano" for the past six years (Fig.4). This bread was also sold online, and was so popular that it was sold out as soon as it was sold at a department store in Tokyo this spring. The company's rolls and danishes using Mochihime will be sold at supermarkets in six Tohoku prefectures, including Aomori and Miyagi, from May this year. Iwate prefecture has the largest cultivation area of Mochihime(80ha as of 2020) mainly in Shiwa town, and Omihachiman city in Shiga(15ha as of 2022), followed by Mie prefecture (5ha) and Aomori prefecture (2ha) in terms of size.



Fig.4
PanoPano premium bread
(from the Shiraishi Food Industry
website)

[Baika Elegance Cooking in Osaka]

Since the transfer of Professor Fujita to Baika Women's University (Ibaraki City, Osaka Prefecture), the use of glutinous wheat has been spreading in the Kansai region as well. Baika Women's University has collaborated with Osaka Gas Network to conduct "elegant cooking" (Fig.5 and Fig.6) five times since two years ago. In May, glutinous wheat products were featured in "Maki Mizuno's Magical Restaurant" (MBS TV). Boulangerie Parigot (Osaka City), owned by the famous chef Ryuzo Abe in the world, also sells bread made from Mochihime. Furthermore, the "Kuwana Glutinous Wheat Project" in Kuwana City, Mie



Fig.5
Baika Women's University x Osaka
Gas "elegant cooking" (Provided by
Professor Fujita)



Fig.6
Five dishes made entirely from
glutinous wheat: kayaku rice,
dumplings in soup, red bean paste
buns, crepes, pancakes (Provided by
Professor Fujita)

Prefecture, which brings together producers, retailers, and bread manufacturers, has started and has been successful.

[Toward future collaboration between the fields of medicine, welfare, food, and agriculture]

Professor Fujita has been researching products that make use of the food functionality of glutinous wheat, and "barrier-free foods" that can be eaten by all persons from infants to the elderly. In addition, "wheatberry food" unique to glutinous wheat has been realized. Regarding the future of glutinous wheat, Professor Fujita noted that "glutinous wheat has both the chewiness of mochi and the slippery texture of noodles and is characterized by its ease of consumption and smoothness. It is a food that is truly suitable for collaboration between the fields of medicine, welfare, food, and agriculture." His dream for the future is to have people enjoy eating mochi wheat at welfare facilities for the elderly, and hopes that not only interest in glutinous wheat will increase among farmers, but also that the number of growers will increase.

URL for the "Episodes" series

<https://www.naro.go.jp/laboratory/brain/contents/fukyu/episode/index.html>

<Project name>	Science and technology research promotion program for agriculture, forestry, fisheries and food industry
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<Title>	Development of food with novel texture from glutinous wheat based on past business/human intervention studies
<Leading research institutes>	Aomori University of Health and Welfare, Agri No Sato Oirase, etc.