



Vegetables and the Diet of the Edo Period, Part 1

Vegetables and Meals of *Daimyo* Living in Edo

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Introduction

Most of the vegetables currently used in Japan were introduced from other countries at various points throughout history. Vegetables native to Japan are very limited, and include *udo* (Japanese spikenard, *Aralia cordata*), *mitsuba* (Japanese wild parsley, *Cryptotaenia japonica*), *myoga* ginger (*Zingiber mioga*), *fuki* (giant butterbur, *Petasites japonicus*) and *yamaimo* (Japanese yam, *Dioscorea japonica*). The domestic turnips, *daikon* radish, green onions, oriental mustard (*Brassica juncea*), varieties of squash, and eggplant currently used in Japan were introduced from the Chinese mainland and Korean peninsula.

Eventually, Danish squash, watermelon, chili peppers and sweet potatoes came to Japan through trade with Portugal during the 16th century, and carrots, celery, spinach, and edible chrysanthemum (*Chrysanthemum coronarium*) via trade with China during the Ming dynasty (1368–1644). As Japan's climate is suited to these vegetables domestic cultivation expanded, and the development of fertilizers and farming tools during the Edo period (1603–1868) led to the mass production of vegetables as well as rice and wheat.

From 1735 to 1738, botanist Niwa Shohaku (1691–1756) surveyed the agricultural produce of various regions. The data was then classified into four categories: cereals, leafy vegetables, squashes and fruits. An extremely large number of vegetables are found in the survey, identified by variety. For *daikon* radish alone, for instance, there are 164 different names used in data from 79 provinces in 34 regions. *Natsu* (summer) *daikon*, *aki* (autumn) *daikon*, *sangatsu* (March) *daikon*, and *shigatsu* (April) *daikon* are some of the varieties named for the season in which they were commonly harvested. Varieties such as Edo *daikon*, Nerima *daikon*, Owari *daikon*, and Hadano *daikon* are named for the region

in which they were grown. The names given to eggplant were also varied, including round eggplant, long eggplant, calabash-shaped eggplant, red eggplant, white eggplant and black eggplant.

The primary suppliers of fresh vegetables to the three largest consumer cities of Edo, Kyoto and Osaka were suburban farming villages. *Buko Sanbutsu-shi* (1824) is a record that lists agricultural products from the Musashi region that included Edo. Vegetables are listed by the area in which they were grown: *daikon* radish and carrots in Nerima (present-day Nerima ward, Tokyo), *mizuna* (Japanese mustard, *Brassica rapa var. nipposinica*), Chinese celery (*Oenanthe javanica*), *mitsuba* and edible chrysanthemum in Senju (present-day Adachi ward, Tokyo), burdock (*Arctium lappa*) in Iwatsuki (present-day Iwatsuki, Saitama prefecture), taro and sweet potato in Kasai (present-day Edogawa ward, Tokyo), eggplant in Komagome (present-day Toshima ward, Tokyo) and Senju, and corn in Naitoshuku (present-day Shinjuku ward, Tokyo). Other vegetables named in the record

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Buko Sanbutsu-shi, Iwasaki Tsunemasa, 1824 (property of Tokyo Kasei-Gakuin University Library), photographed by the author

include squashes, garlic chives (*Allium tuberosum*) and *myoga* ginger. The same record also shows the wide variety of fruits cultivated in the region, such as plums, apricots, peaches, *nashi* (Japanese pear), persimmons, loquats, *yuzu* and figs. This great diversity in seasonal vegetables would have significantly enriched the diet of Edo people.

In this article, the author considers the role of vegetables in the diet of Edo-period people by examining concrete records of meals that show how vegetables were used at that time. The meals of Edo people would have varied by social status. In addition, everyday meals would have been completely different from formal or ceremonial meals served at special events in terms of both contents and scale. Therefore, everyday meals and special meals will be compared to identify the ways in which vegetables were used with both types. Additionally, the author would like to point out the rather low prices of vegetables compared to seafood, the significance of pickled vegetables, and the production and sale of processed vegetable products, such as tofu and deep-fried tofu, which were inexpensive and frequently used in everyday meals. Part one of this article introduces the ingredients used in meals served to a retired *daimyo* (regional lord) at his residence in Edo to examine the use of vegetables and how their use varied by season.

1. *Gozen Nikki*, a Historical Record

Both the upper class and commoners alike often kept records of ceremonial meals prepared for special occasions, but rarely for everyday meals. *Gozen Nikki*, which is the primary source of information

used in part one of this article, is an almost daily record of meals prepared over a ten-month period, from November 1800 to September 1801. This historical document is presently in the possession of the National Institute of Japanese Literature.

Initially, it was unknown to whom the recorded meals were served. Through extensive investigation using the few clues contained in the record, the person has been identified as Sanada Yukihiro (1740–1815), the sixth lord of the Shinshu Matsushiro domain (present-day Nagano, Nagano prefecture). The meals were served to him and his wife, and recorded alternately by four retainers in charge of the retired *daimyo*'s meals.

Yukihiro was born on January 21, 1740. At the age of thirteen, he succeeded his father as lord of the domain following his father's untimely death. Yukihiro retired in 1758, at the age of 59, and died in 1815 at the age of 76. This was quite a long life for the period. *Gozen Nikki* records Yukihiro's meals during his second and third years of retirement.

The Sanadas were granted three residences in Edo by the Tokugawa government. The family's primary Edo residence was at Tameike, a second urban residence was at Akasaka Nambuzaka, and their suburban residence was at Fukagawa. Other Sanada records indicate that Yukihiro lived in the Akasaka Nambuzaka residence after his retirement. This house no longer exists, but its stone wall and foundation, as well as the Hikawa shrine near the site remain to this day. Yukihiro often visited Hikawa shrine as well as Seitoku temple, behind the shrine, which was the Sanada family temple in Edo.

Seitoku temple is now located in Isehara, Kanagawa prefecture.



Photo Stone wall surrounding the grounds of the Sanada's Akasaka Nambuzaka residence in which Yukihiro lived after retirement. The road leads to Hikawa shrine, which Yukihiro frequently visited, and Seitoku temple.

Map Reproduced from *Edo Kirie-zu to Tokyo Meisho-e 29 Zoho-hosei-Akasaka Ezu*; edited by Tsutomu Shiraishi and published by Shogakukan Inc. Originally drawn around 1850.

2. Ratio of Everyday Meals to Ceremonial Meals According to *Gozen Nikki*

Gozen Nikki records three meals for nearly every day from November 1800 to August 1801. Various other Sanada records indicate that the timing of the meals generally corresponded to breakfast, lunch served between 10:30 a.m. and 1:00 p.m., and dinner or supper that could have been served anytime between 4:00 and 10:00 p.m. These records indicate that as Yukihiro woke between 5:00 and 7:00 a.m., breakfast was generally served around 7:00 or 8:00 a.m. An early 20th century researcher of culture and lifestyle of the Edo period, Mitamura Engyo, has written that the timing of lunch varied greatly during the Edo period according to a number of circumstances, and could have been eaten anywhere between 10:00 a.m. and 5:00 p.m.

These meals can be generally divided into two patterns. The first pattern was a meal consisting of rice, soup, one or two side dishes, and pickles. Sake and sake hors d'oeuvres were not generally served. The second pattern consists of a sake ritual, a formal dinner, and a drinking party. Although the specifics of the formal dinner vary depending upon the occasion, two to three individual trays, each holding several dishes, were served to each guest. *Gozen Nikki* describes these meals as ranging from one soup and three dishes to three soups and seven dishes. Sake was sometimes served with suitable dishes. In this article, we categorize the first pattern as everyday meals and the second pattern, with its sake and formal dinner, as ceremonial meals.

To discover the ratio of everyday meals to ceremonial meals (including those served at places Yukihiro visited), all meals recorded in *Gozen Nikki* have first been divided into breakfast, lunch, and dinner. The meals have then been categorized as everyday meals or ceremonial meals, and the number of meals falling into each of the six categories (everyday breakfast, ceremonial breakfast, everyday lunch, ceremonial lunch, etc.) calculated. Naturally, records for 294 days over ten months indicate an overwhelmingly greater number of everyday meals with 290 everyday breakfasts, 259 everyday lunches, and 264 everyday dinners. From these results, we can assume that Yukihiro was served



A page from *Gozen Nikki* (artifact of the Hatta family, property of the National Institute of Japanese Literature, photographed by the author)

a formal dinner with sake approximately once a week.

Though *Gozen Nikki* seems to indicate that Yukihiro did not go out often, another record contradicts this. Therefore, the meals recorded in *Gozen Nikki* may include those set for him that he never ate, or those served only to his wife. Further research into this matter is necessary.

3. Vegetables as Ingredients

How were vegetables used over the ten-month period covered by *Gozen Nikki*? Use of "vegetables" here applies generally to all plant foods, including beans, potatoes and fruits. In order to establish the position of vegetables in the diet, we must also look at seafood and other food products. Therefore, we will first examine everyday meals.

The two charts below show three typical everyday meals served on days in January and June. Although these examples include stone flounder and crimson sea bream, seafood was rarely served with everyday meals. Seasonal vegetables such as *daikon* radish, turnips, *udo* (Japanese spikenard) and *enoki* mushrooms (*Flammulina velutipes*) are included in the January example, with eggplant, *myoga* ginger and winter melon in the June example. The prepared dishes contained primarily simmered vegetables, mushrooms and potatoes. It is worth noting that dried bonito shavings were often used to garnish Yukihiro's simmered vegetables and tofu dishes.

January 18, 1801

● Breakfast

Rice, soup with *udo*, dish of lily bulbs, green leaves and dried bonito shavings, tofu and egg boiled in thick *miso* soup, pickles

● Lunch

Rice, soup with turnip leaves, dish of wheat gluten, taro and *enoki* mushrooms slightly thickened with kudzu starch, stone flounder teriyaki, pickles

● Dinner

Rice, soup with julienne *daikon* radish, dish of tofu and *matsutake* mushrooms (*Tricholoma matsutake*), pickles

used in more than one meal almost every day. As the June 5th example indicates, it was not unusual for tofu to be served with all three meals.

The only animal products included in Fig. 1 are dried bonito shavings and eggs. This does not mean that fish and other seafood products were not used. Varieties of sea bream and righteye flounder were served an average of three to five times per month, while perch, barracuda, sillago, horse mackerel and *kamaboko* (steamed fish paste) appear to have been served one to five times over a ten-month period. Clearly, Yukihiro's everyday meals consisted primarily of vegetables and other plant foods.

Eggplant was the third most frequently used ingredient, though Fig. 2 shows that its use was limited to the fourth through eighth months of the lunar calendar. Between the fifth and seventh months, in particular, eggplant was served fifty times per month. That is more than once every two meals. The June 5, 1801 chart shows that eggplant was served for both breakfast and lunch.

Some background information regarding grilled tofu, the fourth most frequently used food shown in Fig. 1, may be helpful. During the Edo period, a block of tofu was five to six times larger than today's standard size. Tofu could be purchased as full-sized blocks, or half or quarter blocks. Tofu was a popular and affordable ingredient to the common people of Edo. As the cost of ingredients was not likely an issue for the Sanadas, the frequent use of tofu and grilled tofu seems to indicate Yukihiro's desire to keep everyday

June 5, 1801

● Breakfast

Rice, soup with luffa, dish of eggplant and *arame* kelp, scrambled tofu with chopped walnuts and julienned ginger topped with thick starch sauce, pickles

● Lunch

Rice, soup with tofu and dried bonito shavings, dish of eggplant wedges, *myoga* ginger and *hatsutake* mushrooms (*Lactarius hatsudake* Tanaka), dish of steamed crimson sea bream sprinkled with sesame seeds and salt, pickles

● Dinner

Rice, soup with winter melon and dried bonito shavings, dish of tofu with dried bonito shavings, pickles

These examples show that tofu was a regular part of meals, appearing nearly every day.

Fig. 1 shows fourteen of the most frequently used ingredients in descending order of average monthly use. Tofu was used most frequently with an average of 65 times per month. Given that the average number of everyday meals per month was 80, tofu was

meals simple, or his preference for tofu dishes.

Fig. 2 illustrates the monthly use of the most common vegetables. While eggplant was used only in the summer, *enoki* mushrooms and lily bulbs were frequently used in the winter. *Udo* was used in the winter and spring, and *daikon* radish was used throughout the year, with the exception of the sixth

Fig.1 Average Monthly Use by Ingredient (Everyday Meals)

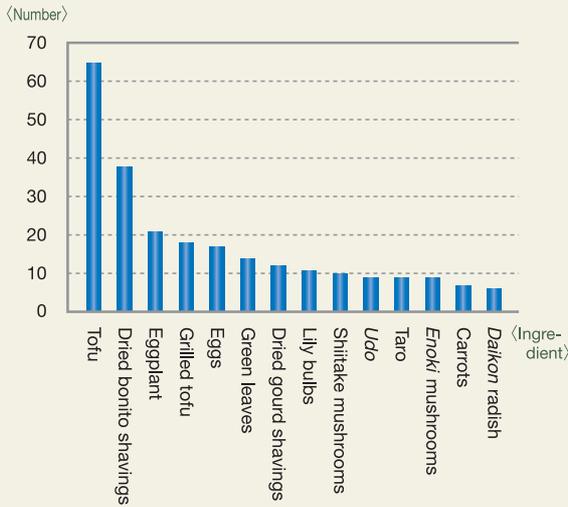
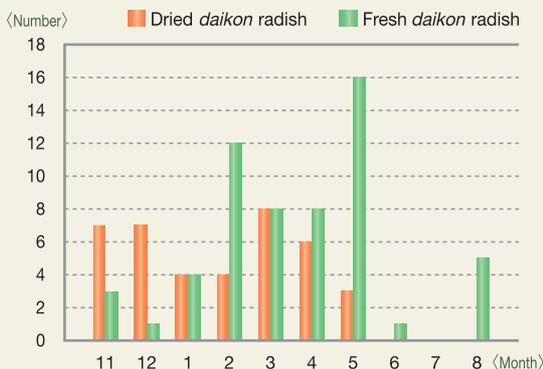
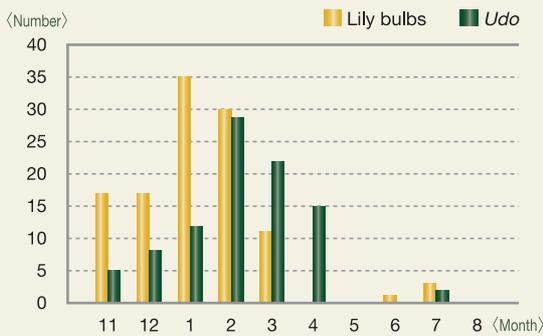
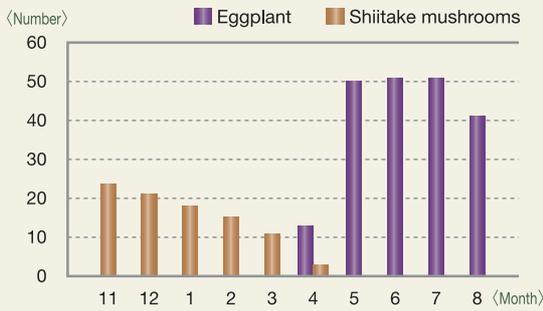


Fig.2 Frequency of Use of Individual Vegetables by Month



Charts created by the author by calculating number of times each ingredient was mentioned in *Gozen Nikki*. Months indicated in Fig. 2 from lunar calendar.

and seventh months. As stated in the introduction, many seasonal varieties of *daikon* radish were grown to make it available almost year-round. Though there is no specific evidence that Yukihiro ate much *daikon* radish, it was most likely served as pickles. *Gozen Nikki* does not include any record of ingredients used in the pickles served to Yukihiro, but during the Edo period various forms of pickled *daikon* radish were extremely common, regardless of social status, in everyday and ceremonial meals alike.

In addition to the vegetables included in Fig. 1 and 2, a great many other vegetables, potatoes and fruits can be found in Yukihiro's everyday meals. They include burdock, *myoga* ginger, sprouts, *mitsuba*, cowpeas, green beans, Danish squash, winter melon, luffa, New Zealand spinach, *fuki*, Japanese flowering fern (*Osmunda japonica*), western bracken fern (*Pteridium aquilinum*), bottle gourd (*Lagenaria siceraria var. hispida*), hyacinth beans (*Dolichos lablab*), *seri* (water dropwort, *Oenanthe javanica*), *shiso* (*Perilla frutescens*), ginger, sesame seeds, Szechuan pepper (*Zanthoxylum piperitum*), *wasabi* (Japanese horseradish; *Cryptotaenia japonica*), bamboo shoots, sweet potatoes, Chinese yams, Japanese yams, chestnut, iwatake mushrooms (*Umbilicaria esculenta*), *matsutake* mushrooms, *nori*, *hijiki* (*Sargassum fusiforme*), *kombu* kelp, freeze-dried tofu, *konnyaku* (konjac or devil's tongue), and wheat gluten. Unless overlooked, Yukihiro does not appear to have eaten the so-called "pungent smelling" green onions, garlic, garlic chives, *asatsuki* chives (*Allium schoenoprasum L. var. foliosum Regel*) or *rakkyo* (*Allium chinense*) forbidden in the diets of Zen priests. This may have been common among *daimyo*, though more research is necessary to determine whether or not a specific reason exists.

4. The Use of Vegetables and Processed Vegetables

The most common use of vegetables in everyday meals was as ingredients in soups or simmered dishes. *Gozen Nikki* does not mention the use of seasonings, but it is reasonable to assume that *miso* (fermented soybean paste) and soy sauce were the basic seasonings for soups and prepared dishes. As sugar and other sweeteners were not commonly used at the time, it is safe to assume that dishes served to Yukihiro were not sweet. However, shortly after the time in which Yukihiro's meals were recorded, some restaurants began using sweeteners in their dishes. The owner of a well-known high-class Edo restaurant published a book that specifies a number of dishes sweetened with *mirin* (a sweet cooking sake with low

alcohol content). Another publication from the end of the Edo period tells us that *mirin* and soy sauce were used to flavor charcoal-broiled eel in Edo. The author of the publication states that while dried bonito broth with sake and soy sauce were used to season dishes in Kyoto and Osaka, the use of *mirin* or sugar and soy sauce had become the custom in Edo, despite the fact that the sweet seasonings spoiled the natural flavor of foods. The practice of sweetening dishes that began primarily in Edo had spread throughout the country by the Meiji era (1868–1912).

Tofu was the most common ingredient in Yukihiro's meals. It was most often served in soups, though it was also prepared in a wide variety of ways for use in a number of dishes. A cookbook published in 1782 introduces 100 tofu dishes of the Edo period. One of the dishes, *hachihai dofu*, is prepared with very smooth tofu finely sliced into long noodle-like strips that are simmered in six cups of water seasoned with equal amounts of sake and soy sauce. The dish was garnished with grated *daikon* radish, which was said to detoxify the tofu thought to contain toxins at the time. Another dish, *tsuto dofu*, is described as a steamed tofu roll flavored with *amazake*, a thick and sweet non-alcoholic sake. *Tsuto dofu* was prepared by squeezing the liquid from tofu, mixing it with *amazake*, rolling the mixture in a bamboo mat and then steaming the roll. The steamed roll was then sliced and served. *Fuwafuwa dofu* was a dish made of scrambled egg and tofu sprinkled with sesame seeds. Another cookbook describes a dish of porous tofu simmered in dried bonito broth for a day. It is clear that cookbooks of the Edo period included a number of tofu recipes. It is possible that Yukihiro's cooks referred to these books in order to add variety to the ways in which they served tofu.

5. Vegetables in Formal/Ceremonial Meals

According to *Gozen Nikki*, formal and ceremonial meals were most often served in December and January. It has long been Japanese custom to clean and perform necessary repairs at year's end in order to start the new year fresh. This can be compared to the western custom of spring cleaning. Sumptuous formal dinners were held on December 21st for year-end cleaning, December 29th to celebrate year's end, and January 1st to celebrate the new year. These formal dinners began with a sake ritual followed by the formal dinner, served with three courses of individual tray tables, and finally a drinking party at which sake and small side dishes were served. At formal dinners held on January 2nd and 3rd, as well as Yukihiro's

birthday on January 21st, two courses of individual tray tables were served with sake and side dishes. On the occasions of cherry blossom viewing in the spring, moon viewing in the autumn, the shrine festival held in February, seasonal festivals held in March, May and July, and Buddhist services and ceremonies, sake and desserts were served in addition to the formal dinners of rice, soup and three prepared dishes.

The following is the menu from Yukihiro's birthday celebration. Though details are not recorded, it is clear that many prepared dishes and side dishes were

Sake ritual

- Dried anchovies, pickled plums, soup with sea bream and fish fin**
- Zoni**
Mochi rice cake, skewered dried abalone, taro, *daikon* radish, tofu, green leaves, *kombu* kelp, dried bonito shavings, [remaining omitted]
- Rice with red beans sprinkled with sesame seeds and salt**

Formal dinner

- First tray table**
Rice, soup with fish balls, *enoki* mushrooms and kalimeris aster, dish of sea bream sashimi and bloody clams dressed with chestnut, ginger, green laver and kumquat, simmered duckling with *shoro* mushrooms and wheat gluten
- Second tray table**
Soup with perch and green *kombu* kelp, dish of prawns and fresh shiitake mushrooms, small cup of *mitsuba*, *udo* and field horsetail, grilled crimson sea bream
- Side dish served with sake**
Kamaboko, abalone, sillago, steamed arrowhead, tangerine, pickled ginger and edible brown alga served on a shallow square tray
- Sashimi**
Flounder garnished with sprouts and *udo*
- Dish served on tray table with legs**
Crimson sea bream with *hijiki* seaweed and *mitsuba*
- Assorted dishes served in multi-tiered boxes**

Dessert

Drinking party

- Soup; roasted chicken; large, shallow bowl, deep bowl, large plum-shaped tray (dishes served in these omitted)**

served—a significant contrast to everyday meals.

The *zoni* served during the sake ritual was a heavy soup containing *mochi* rice cakes simmered in a broth with vegetables. This type of dish is still served in celebration of New Year's today. *Zoni* was typically served during sake rituals held at the beginning of formal and ceremonial dinners. The menu from Yukihiro's birthday celebration contains a number of seafood and processed seafood products that rarely appeared in everyday meals, including sea bream, perch, flounder, abalone, dried squid, herring roe and salt-cured mullet roe. Vegetables were also an essential ingredient in many dishes. The *udo*, *daikon* radish, shiitake mushrooms, taro, *seri*, *myoga* ginger and tangerines listed for this formal dinner were also used in everyday meals. Arrowhead (*Sagittaria trifolia*) and pickled plums were not included in records for everyday meals, though pickled plums may have been served. Sweet potatoes, dried gourd shavings and eggplant were not included in records for any formal meals, though that does not necessarily mean that they were never used.

Conclusion

The historical data referenced in this article are records of meals for retired *daimyo* Sanada Yukihiro. Though he did not often eat seafood with everyday meals, this may have been due to personal preference. This comment is based on a comparison of records of the meals served to Anbe Nobuoki (1847–1895) at his residence in Edo in 1866 while he was lord of the Okabe domain in present-day Fukaya, Saitama prefecture. While tofu was the ingredient most frequently served to both, the deep-fried tofu served to Nobuoki does not seem to have been served to Yukihiro. Records from both *daimyos* show that vegetables were used much more frequently than seafood or processed seafood products. *Daikon* radish, burdock, taro, sweet potatoes, lily bulbs and carrots were the most common vegetables served to Nobuoki, while eggplant does not seem to have been served as frequently. Another notable difference is that eggs, apparently a favorite of Nobuoki, seafood and various processed seafood products appear much more frequently in Nobuoki's records for everyday meals than in Yukihiro's.

For example, the record for Nobuoki's everyday meals from a day in June, the same month used for one of Yukihiro's examples, shows that Nobuoki had a soup with boiled fish and Japanese yam paste and a dish—most likely simmered—containing freeze-dried *konnyaku* (konjac or devil's tongue) for break-

fast, salt-grilled horse mackerel, rolled omelet garnished with *wasabi* (Japanese horseradish) and sake for lunch, and tofu skin and simmered burdock for dinner. Though the number of dishes served with each of Nobuoki's meals was fewer than that for Yukihiro, sashimi seems to have been served quite frequently.

It seems that Nobuoki was quite fond of sake. His dinners often consisted of dishes that went well with sake, such as sashimi, eel and vinegared abalone. Nobuoki's wife was sometimes served slightly different dishes, such as abalone sashimi rather than vinegared sashimi. This preparation of dishes according to individual preference, however, was only possible with everyday meals. It is interesting that even records of everyday meals can show us the individual preferences in foods of the people of the Edo period. We see differences in Yukihiro's and Nobuoki's meals that reflect differences in the times as well as individual preferences. Further differences can be seen in the vegetables used in everyday meals compared to those used in formal and ceremonial meals. However, it can be inferred from these two records that even among the *daimyo* class, everyday meals were relatively simple, consisting of rice, a soup, and one or two dishes with vegetables as the primary ingredients.

Yukihiro's favorite, tofu, was served in a variety of ways, though this was only possible because he had cooks to prepare his meals for him. By closely examining Yukihiro's meals, we gain a general idea of the everyday meals of the upper class during the Edo period. These data show that an extremely broad array of vegetables was supplied seasonally to the city of Edo, significantly enriching the daily diet of its people.

***Months cited from *Gozen Nikki* and other documents are lunar calendar months. In some cases, the months according to the modern Gregorian calendar (January, June, etc.) have been used for convenience.**

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