

## TECHNOLOGIES FOR GROWING JAPANESE CABBAGE (Mizuna)

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**Annotation:** Japanese muzina is of interest to gardeners because its delicate and spicy taste is very pleasant. Japanese cabbage forms a large spreading leaf 60-90 cm in diameter, 35-50 cm in height. Cabbage has many leaves because it has well-developed lateral shoots. Japanese cabbage is considered a very frost-resistant plant. Its seeds are + 3.... It begins to germinate at +4°C, the seedlings withstand moderate frosts well. The leaves are collected at a height of 35-40 cm, with a diameter of 55-65 cm in a horizontal or slightly raised position. A lyre-pinnate with a large cut along the edges, a medium-sized leaf, dark green in color, becomes smooth. The yield of Japanese Mizuna cabbage is 6,7 kg / m<sup>2</sup>, the mass of one bush is 1 kg.

**Keywords:** Japanese cabbage, sowing period, planting scheme, yield, temperature.

**Annotatsiya:** Yapon Muzina karami nozik va achchiq ta'mi juda yoqimli bo'ganligi bilan bog'bonlarda qiziqish uyg'otadi. Yapon karamini diametri 60-90 sm, balandligi 35-50 sm bo'lgan katta yoyilgan barg hosil qiladi. Karamning yaxshi rivojlangan lateral kurtaklari bor bo'lganligi sababli barglari ko'p. Yapon karami sovuqqa juda chidamli o'simlik hisoblanadi. Uning urug'lari +3....+4 C da unib chiqqa boshlaydi, ko'chatlari o'tacha sovuqqa yaxshi bardosh beradi. Barglari 35-40 sm balandlikda, diametri 55-65 sm gorizontal yoki biroz ko'tarilgan holatda yig'iladi. Chetlari bo'ylab katta kesikli lira-pinnate, o'rta o'lchamdagi barg, quyuq yashil rangda, silliq bo'ladi. Yapon Mizuna karamining hosildorligi 6,7 kg/m<sup>2</sup> ni tashkil qiladi, bir buta massasi 1 kg.

**Kalit so'lar:** Yapon karami, ekish muddati, ekish sxemasi, hosildorligi, harorat.

**Аннотация:** японская цветная капуста Музина вызывает интерес у садоводов тем, что ее нежный и пряный вкус очень приятен. Японская капуста образует большой раскидистый лист диаметром 60-90 см и высотой 35-50 см. У капусты много листьев из-за хорошо развитых боковых побегов. Японская капуста-очень морозостойкое растение. Его посевной материал +3.... Начинает прорастать при + 4°C, всходы хорошо переносят сильные морозы. Листья собирают высотой 35-40 см, диаметром 55-65 см в горизонтальном или слегка приподнятом положении. Лист лировидно-перистый, среднего размера, темно-зеленого цвета, с крупным надрезом по краям, гладкий. Урожайность японской капусты Мизуна составляет 6,7 кг / м<sup>2</sup>, Масса одного куста-1 кг.

**Ключевые слова:** Японская капуста, сроки посадки, схема посадки, урожайность, температура.

Introduction. Japanese cabbage, as the name suggests, came to us from Japan, but some sources call China its homeland. In any case, in the East it has been cultivated since the beginning of the 16th century, and reached Europe only by the 20th century. In North America, it is called "Japanese green salad" and "Green mustard". In our latitudes, mizuna is perceived more as a salad, rather than as cabbage. In appearance, it resembles arugula and has emerald green or dirty red lettuce leaves. This is one of the subspecies of cabbage, that is, it does not form heads. The carved lace leaves of such a plant are a luxurious flower, so it is often used for decorative purposes to decorate gardens and vegetable gardens. The yellowish flowers are very small, and its taste is not like that of other vegetable crops. Despite all its pungency and sharpness, it is very mild, since mizuna contains less mustard oil than other similar subspecies. Such cabbage is characterized by early maturity, and thirty-five to forty days after sowing, it is completely edible. The main part. Mizuna salad is a subspecies of green pepper salad. It belongs to the cabbage family, and the homeland of the plant is Japan. These two facts led to the fact that it is also called Japanese cabbage, although it is not the same as the white cabbage we are familiar with in culture. The plant has a very interesting appearance: numerous stems with carved leaves branch from a large root. They have a taste similar to all other salad crops - mild, but spicy, compared to the most familiar to us greens, it is more like arugula - by the way, not only in taste, but also in the appearance of its leaves. It is actively used in cooking salads on the Pacific coast. Unfortunately, in our country it is not so easy to buy it, but if you have a desire to try Mizuna, but do not want to go to Japan for this, you can grow it.

It is worth noting that Japanese cabbage can be grown not only for new taste sensations, but also for a new taste. Great benefits are inherent in this plant. There are several varieties of Mizuna. Most often you can find red Mizuna and green Mizuna. In addition, Emerald Pattern, Little Mermaid and Dude are also in demand. Little Mermaid is a mid-ripening variety. It got its name because of the strange shape of the leaves, which is somewhat reminiscent of a mermaid's tail. Dude is one of the early ripening varieties, and after cutting new leaves grow faster than other species.

There are about 5 thousand plants in the Earth's flora for human consumption. About 600 vegetable plants are grown in all countries of the world. Japanese cabbage is a valuable vegetable and ornamental crop, the leaves with a delicate cabbage flavor are consumed.

Japanese cabbage is rich in vitamins, including potassium, calcium, phosphorus and iron, and Lysine has the ability to dissolve foreign proteins entering human blood and is the main blood purifier from harmful microbes and viruses. However, there is no complete information about the biochemical composition of Japanese cabbage, so this may also be the subject of further study. When growing each crop, it is necessary to first study the early or late ripening of the variety, its characteristics, and then apply scientifically based methods of planting and growing in what climatic conditions, in what scheme and at what times.

If early-ripening varieties are sown late or mid-season, their biological characteristics will not be met, and the yield will decrease sharply, and even leaves will not form. The study of the planting dates of Japanese cabbage was carried out in order to determine the optimal timing of harvesting plants to obtain a commodity product with high yield and high biochemical indicators.

Phenological observations of the development of Japanese cabbage showed that the planting time in the Tashkent region significantly affects the duration of the interphase periods. Sowing

dates, the duration of the seed germination period practically does not change and is from 3 to 5 days. The appearance of seedlings on the 3rd or 5th day can be explained by changes in day or night temperatures. The appearance of the first true leaf was recorded on the 7th-8th day, and no significant differences were observed depending on the time of planting. At the same time, the early appearance of the first true leaf in varieties No. 1 and No. 2 in the first decade of April can be explained by the individual phenotypic response to insufficient solar activity and increased cloudiness. The time of appearance of 6-7 true leaves (i.e., the seedling stage for transplanting to a permanent place) differs for different planting dates.

Conclusion. The correct use of modern agrotechnical measures is important in growing high-quality Japanese cabbage. Studies show that when scientific approaches are used at each stage, from seed selection to planting and care, the yield and quality of cabbage products increase significantly. In particular, it is possible to grow environmentally friendly and export-oriented products through drip irrigation, modern greenhouses, the use of agrotechnical substances and the introduction of biological protection measures. In the future, the study of advanced foreign experiences and further expansion of scientific research in this area will help to meet the need for Japanese cabbage in our country and expand its export opportunities.

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