

# FEATURES OF THE TECHNOLOGY OF GROWING BROCCOLI CABBAGE

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## Abstract

In this article, information on the peculiarities of obtaining a high and high-quality yield of broccoli cabbage by controlling its growth and development, taking into account its attitude to the complex of environmental conditions.

**Keywords.** Broccoli cabbage, complex of environmental conditions, transitional crop, biotic factors, lighting, temperature, planting scheme, soil fertility.

## Introduction

The growth, development and yield of agricultural crops depends on their heredity, a complex of environmental conditions, endurance to adverse environmental influences, the ability to use the flux of light energy, soil moisture and nutrients in it, as well as the content of oxygen and carbon dioxide in the air.

One of the main tasks in obtaining high and high-quality yields of vegetable crops is to provide favorable conditions for their growth and development. To solve this problem, it is required to know the methods of controlling the growth and development of this crop type based on the latest advances in agronomy science and practice.

The complex of environmental conditions that determine the growth and development of types and varieties of vegetable crops is extremely diverse, complex and unstable.

When studying the relationship of plants to a complex of environmental conditions, an important task is to determine the role of each environmental factor in this complex. To do this, the temperature (air temperature and soil temperature), lighting (length of the day, content and intensity of light, duration of sunlight), humidity (amount of precipitation, level of ground water, the presence of artificial water bodies, soil and air humidity), feeding conditions (agrochemical and mechanical composition of the soil, soil solution reaction), air content (carbon dioxide, the content of various impurities and toxic gases, wind and atmospheric pressure), It is required to have a clear understanding of biotic factors (microbiological processes in the soil, algae, diseases and pests).

All of the above factors are inextricably related and together influence for growth and development of vegetable crops.

Along with plant growth, it depends on its external factors. The demand for the vaccine also varies. As the plant size grows, so does the availability of light. As a result of increasing the size of the root system, not only does the volume of the soil used by the plant change, but also the agrochemical and physical properties of the soil change. As a result, the plant's ability to absorb nutrients and moisture also increases.

The change in lighting conditions leads to an increase in temperature, increasing the amount of



evaporation. And the change in the thermal regime increases the ability of plants to absorb nutrients. Broccoli cabbage is a cold-resistant vegetable crop, due to very cold and very hot temperatures, as well as low relative humidity of the air, the quality of the product deteriorates and the yield decreases ([URL://http://farming.org.ua.html](http://farming.org.ua.html)).

The favorable temperature for growing broccoli cabbage is between 15°C and 25°C. Temperatures above 25°C are considered the extreme temperature for broccoli cabbage. It tolerates frost in autumn-winter – up to 8-10 °C.

Broccoli cabbage, unlike other varieties of cabbage, is not demanding on soil fertility. For growing and growing broccoli cabbage requires soils with a light mechanical composition, a soil solution with a weak acidic reaction (Yu.V. Sleptsov, 2010).

Broccoli cabbage is usually grown through seedlings. Plants will catch when transplanted into the field, and their productivity will largely depend on the quality of the seedlings. It is required to plant healthy and energetic seedlings, forming 2-3 chin leaves.

The technology of growing broccoli cabbage seedlings (humidity and temperature regime, watering, feeding, pruning) is no different from growing a white cabbage seedling.

Healthy and evenly grown seedlings are the pledge of a high yield. Some authors (N.V. Kotsareva, 1996; O.A.Razin, 2000) considers it desirable to transplant 25-30-day-old kochats into the field, some authors (S.M.Adamenko, 2008; Z.I.Kovtunuk, 2001) recommends planting seedlings 30-60 days old.

Yu.M.Zabara et al. (2023) studied the effect of seedling cultivation methods on the biometric indicators of broccoli cabbage and found that seedlings grown in plastic cassettes with a size of 65 cm<sup>3</sup> had an advantage over seedlings grown in cassettes with a volume of 18 cm<sup>3</sup> in all indicators. At the same time, the size of the feeding substrate accelerates the growth and development of the root system. As a result, the growth of the plant is also accelerated.

Seedlings grown in the ground under teplitsa conditions have higher indicators in terms of neck length, crown thickness, main stem length and leaf surface size, but have a lower index by root weight than seedlings grown in plastic cassettes with a size of 65 cm<sup>3</sup> (Yu.M. Zabara, 2023).

Agrotechnical methods of caring for broccoli cabbage are carried out on the basis of rules and norms generally accepted for other types of cabbage.

The best rivals are representatives of the squash family, which bear tomatoes, potatoes and onions, and legumes.

Broccoli cabbage is planted up to 45-57, 36-37, and 28-30 thousand seedlings per hectare, depending on the variety - 25, 30, 40 and 50 cm.

This type of cabbage is considered a crop that is extremely demanding to the water regime. Especially during the phase of 6-7 chin leaf production, future flower seedlings are formed on broccoli plants, and small, non-flowery seedlings are formed when there is insufficient moisture in the soil. In addition, the lack of moisture in the soil leads to such negative conditions as a decrease in yield, redness of the flowering plants and early flowering.

Broccoli cabbage is extremely demanding on nutrients. It is especially sensitive to the lack of microelements and molybdenum.

This type of cabbage is a demanding crop for organic fertilizers, and the mechanical composition of these fertilizers is especially effective on light soils, and it is recommended to add 50-60 tons of manure per hectare.

It is desirable to use mineral fertilizers in the following quantities: N 150-200, P 100-150, K 60-80. Since broccoli cabbage is a vegetable crop that is very sensitive to chlorine in the soil, it is desirable to use chlorine-sparing potash fertilizers and sulphate-retaining potash fertilizers in the woods.

The broccoli harvest is harvested in several stages. First, the central head is cut in the presence of dense balls. Harvesting is required when the diameter is 8-25 cm and weight 0.2-0.5 kg. They are cut with the length of the stem (10-20 cm) and 2-3 leaves. Later they grow and develop, release side shoots with small heads. Harvesting of a side shoot is also performed in several stages (M.A. Boltayev et al., 2020).

Thus, proper cultivation of broccoli cabbage, the correct use of broccoli cabbage cultivation techniques, the selection of varieties suitable for the local soil-climatic conditions and proper care of plants using methods of control of growth and development of this crop type based on the latest advances in agronomy science and practice will allow to obtain a rich and high-quality yield.

### References

1. Adamenko S.M. Nutrivant plus olynny ta Granubor natur - unikalni dobriva lky mineralnogo jivleniya / S. M. Adamenko, S.G.Gonchar - Zerno, 2008. - No5. - S.68-70.
2. Boltayev M.A., Misirov Sh.H., Pardayev J.J. Broccoli: significance, preparation and storage. Notice of agrarian science of Uzbekistan. - 2020. - 6 (84).- P.171-174.
3. Kotsareva N.V. Vyrashivaniye rassady ovoshnyx kultur kassetnym metodom // Metodicheskiye rekomendatsii dlya studentov agronomicheskogo i ekonomicheskogo fakultetov po ditsipline "Ovoshevodstvo". - Belgorod: Published by BGSXA, 1996 - 16 pp.
4. Kovtunuk Z.I. Agrobiologichni osoblivosti formuvaniya vrojaju kapustu broccoli v umovax pravoberejnogo Lisostepu Ukraini / Z.I.Kovtunuk // Avtoreferat diss... na zlobuttya naukovogo stupeniya kand. s.g. nauk - Kiev, 2001. – 22 p.
5. Razin O.A. Novye napravleniya v seleksii svetnoy kapusty i broccoli / O.A.Razin, P.Yu.Svetlov, V.I.Startsev // Materialy III nauchno-proizvodstvennoy konferentsii "Introduktsiya netraditsionnyx i redkix selskozyaystvennyx rasteniy", 2000. - T.1. - S.247-248.
6. Sleptsov Yu.V. Ovoshevodstvo, 2010 - No3 – S.64-67
7. Sovremennaya tekhnoloji vyrashivaniya broccoli i svetnoy kapusty // URL://http://farming.org.ua.html.
8. Zabara Yu. M. Vliyaniye kompleksnyx mineralnyx udobreniy I priyomov vyrashivaniya rassady na urojaynost I kachestvo produktsii kapusty broccoli / Yu. M. Zabara, L. Yu. Grebennikova, S. Yu. Sobolev //URL // https://referatdb.ru/geografiya/139934/index.html

