



## ORIGIN AND SYSTEMATICS OF PLANTS OF THE GENUS CAPSICUM L.

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**Annotation;** *Methods of sowing onions and their advantages, as well as methods for increasing their yield using new methods.*


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Currently, great attention is being paid to the study of the plant world. The issues of studying the biology of plants in all regions of the world, their rational use, and protection are attracting the attention of researchers. Botany consists of interconnected main branches. Of these, the study of the morphology, systematics, and biology of plants distributed in the region is of great importance.

**Plant morphology-** This is the largest and earliest-formed branch of botany that explains plant organs, their diversity, and the laws of their formation. The main task of morphology is the study of the external structure of plant organs and metamorphosis (deformed organs). It is an important branch of botany that substantiates the history of plant origin.

**Plant systematics** -is intrinsically linked to morphology, based on morphological characteristics. Systematics has two interconnected floristic and phylogenetic functions: the floristic function gathers more information about species and other larger taxonomic units, placing them in certain systematic categories (species, genus, family, order, class, divisions) based on their similarities. In the phylogenetic task, based on the complex characteristics of plants (morphological, biochemical, paleontological, embryological, immunological, hybridological, etc.), they are placed in such a system that it should reflect the history of the origin of the plant world, their phylogeny.

The biology of plants, that is, their growth and development, depends on their species and the natural climatic conditions of the region. During its growth and development, important morphological, physiological, and biochemical processes occur. In this case, the specific genetic aspects of each organism and the influence of external environmental factors are of great importance. In biological research, the seed of the plant, its germination, the development and maturation of vegetative (root, stem, leaf) and generative (bud, flower, fruit, seed) organs are observed. Additionally, special methods are used to study the developmental conditions of each plant. The homeland of the species of the genus *Capsicum* is South America. In its homeland, it is a perennial herbaceous plant, but cultivated forms are annual. Over time, a vegetable variety of pepper spread to Europe,



Africa, and South Asia. Sweet peppers are mainly grown in central Europe, America, southern Russia, and Central Asia. Its bitter varieties are cultivated in South and Southeast Asia, Africa, South America, and Southern Europe.

In the evolution of the chili pepper plant, its current varieties originated from wild tropical chili peppers with oily, fleshy fruits. In the process of cultivation, pepper fruits grew larger, and the bitter substance in them decreased. As it spreads northward, moderate movement and relative humidity increase, resulting in the emergence of new forms of hot pepper. From these, large, fleshy, double-bodied modern sweet peppers later emerged. In the southern regions, as a result of the cultivation of peppers, the fruits grow larger, but they retain a thin flesh and a high capsic acid content. For this reason, modern hot peppers originated from its southern forms. More than 70% of the total harvest is grown mainly in China, Mexico, Turkey, the USA, and Spain.

Cultivated species of the genus *Capsicum* L-pepper.

1. *C. pubescens* Ruiz et Pavon-pubescent pepper (perec opusheniy) is a low-growing plant with branched, pubescent, and dense leaves. Leaves seed-shaped, rough, pubescent. The flower is purple or apical lobed. The fruit is spherical or oval, elongated. Length 5 cm, width up to 4 cm, initially green, then yellow-brown. The seeds are black, curved, cashmere. Representatives of this species are grown in Peru, Colombia, Guatemala, Honduras, and Mexico. Its wild form has not been identified.


2. *C. pendulum*\* (\*Perec povishy\*). The plant is bitter-green, branched, with pseudo-biometric petiolation, smooth leaves, and long petioles. The flowers are white. The long fruit is white, yellow, or red when the stem is unripe. The seeds are yellow. The species ripens quickly. This species is cultivated in northern Argentina, southeastern Bolivia, and Paraguay.

3. *C. trutescens* L-Buta pepper (Perec kustarnikoviy) is a tall, perennial plant whose stem later becomes woody. The leaves are shiny, thin. The flower is green or yellow and white for the experiment. The fruit is shiny, of various shapes, up to 10 cm long. Late-ripening seeds are bitter-yellow. Hot peppers are also included in this category. However, some systematists consider it a species (*C. sinense*).

4. *C. annum* L - Annual pepper, i.e., vegetable pepper (2n=24) This type of pepper is *Capsicum annum* L, *Capsicum longum* L, or strawberry pepper, and its synonyms are: red, bitter, hot, Mexican, Spanish, Turkish, Hungarian paprika, and chili peppers.

Perennial forms are widespread in nature, while cultivated plants are annual. The stem and leaves are bitter, the leaves are ovate or conical, with long petioles. The false stem is branched, the flower is white, the fruit is a fruit stalk, solitary, double, or clustered. The shape and color of the fruit are diverse. The fruit varies in size, ranging from 1 to 30 cm in length. Its wild forms can be found in Mexico. Cultural forms are widespread in many regions.

*Capsicum annum* L-The pepper species has been differentiated into several subspecies:  
*Conbarietas cerasitorme*



Conoidas  
Tascicubatun  
Langum

Currently, many varieties and hybrid forms of the *Capsicum annuum* L-type, which is important for pepper and is most often grown as an oilseed vegetable crop, have been created.

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