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CARNATION'S FUNGAL DISEASES AND MEASURES AGAINST THEM

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-----ABSTRACT-----

In this article, a literature analysis of diseases caused by fungi, the spread and development of diseases, and effective measures to combat them was studied. Carnation is an annual and perennial plant belonging to the Latin Caryophyllaceae. Today, more than 300 species are known in the world. Distributed in Europe, Asia and Africa. It grows in steppes, meadows, sandy lands. It was a perennial herb growing wild in Uzbekistan. This type can be found in Angren, Ugom, and up to four cloves. Many types of carnations are ornamental and propagated by planting. Cloves require a soil pH of 5.5-6.2.

KEYWORDS: *Alternaria, fusarium wilt, fungal diseases, agrochemical analysis, spread and development of diseases*-----

ENTER

In Portugal, the carnation became a symbol of the destruction of the military dictatorship. On the day of the overthrow of the military regime in the country, the streets were decorated with carnations. In France, cloves became popular after the successful campaigns of the Crestonoses. This event took place in the Middle Ages. According to information, at that time the French Crestonoses in Tunisia were saved from the plague by the tincture of cloves. Cloves have always been popular in the USSR. The same carnation was recognized as a symbol of the Soviet victory in World War II. There are currently 350 varieties of cloves around the world. Breeders have not stopped creating new varieties of this flower. If we are lucky, it will not be surprising if there are 400 varieties of cloves in the next few years. *Dianthus caryophyllus*, a common one- and two-year garden or Dutch carnation species in southern Europe, was the basis for the creation of ornamental varieties of carnations.

In the industrial floriculture of many countries, it is grown in open ground and in greenhouses. Perennial feathery or Turkish Carnation (*D. barbatus*) flowers are small, very fragrant, collected in a thick inflorescence. It is very important in floriculture. The annual Chinese carnation (*D. chinensis*) species differs in flower color and structure. Honeysuckle is one of the most ancient and valuable spices of the East and has a unique position in the international spice trade. Native to the Moluccas in the East Indian Archipelago called the 'Spice Islands', this spice was first introduced to India in the 1800s by the East India Company. Uzbek carnation Latin : *Dianthus uzbekistanicus* is a type of dicotyledonous plant belonging to the family Caryophyllaceae. This plant species was first recorded in 1953 by the Russian botanist Igor Aleksandrovich Linchevsky. Flowers such as roses and tulips are grown together with Turkish specialists in the flower growing cluster "Agro Light Business" operating in Qibray district of Uzbekistan. The document states that until January 1, 2023, the zero rate of customs duty will be applied to the import of tubers, bulbs, tuberous roots, tubers in a state of vegetative rest, vegetative or flowering period, other live plants (including roots), cuttings and bark.

In the decision, training of qualified modern personnel for this field, for this purpose, the following tasks are defined:

- from the 2022/2023 academic year, personnel will be trained in the field of higher education in the field of agriculture for the master's degree in Floriculture;
- From the 2022/2023 academic year, Tashkent State Agrarian University in cooperation with Isparta University of Applied Sciences of Turkey will launch joint training programs for personnel training in landscape horticulture and floriculture;



A short-term training course for mid-level personnel in the areas of landscape design, floriculture selection, and planting in agrotechnological technical schools in Shahrikhan district of Andijan region, Toraqorgan district of Namangan region, and Zangiota district of Tashkent region training courses are organized. Based on the principles of public-private partnership, the Floriculture Training Center will be launched in Tashkent region. In recent years, special attention has been paid to floriculture and horticulture in the republic, such as wiring. In particular, on August 4, 2021, the decision of the President of the Republic of Uzbekistan on the further development of floriculture and horticulture in the territories of the Republic was adopted. According to it, "Flower Growers' Association" was established with the support of the Ministry of Self-Development of Agriculture.

GOALS AND OBJECTIVES

The purpose of this study is to improve the protection of honeysuckle in Tashkent city and Tashkent region. Carnation is a plant that winters in open ground without covering. Carnation Margarita porcelain flower. The flowers are big and different colors, layered, thin and fringed. This flower is good for planting in the garden. When it is planted in January-February, it begins to bloom in the same year. The bushes are beautiful, grow up to 40 cm in height, are branched and pink, bloom all summer and fall. If it is moved to a warm and bright house, it will bloom for a long time even in winter. A multi-floral, ever-blooming carnation from Nissa. The flower is large, the diameter is 6-8 cm, the stem is hard and long, the color is mainly the color of the flower white, pink becomes dark red. But sometimes colorful ones are also found. The large-flowered Dutch carnation is highly valued not only for its large flowers, but also for its blooms throughout the fall and winter and for its pluckable flowers.

CARNATION'S DISEASES

1. Spotting – *Alternaria* – *Alternaria dianthi* Stev. meat _ Hall. Distribution - Europe, Canada, Brazil, West Africa, Turkey, New Zealand, Russia, Uzbekistan. The fungus infects the leaves and stems of the plant. Initially, small, dark brown spots are formed on the leaves. Later, a thick yellow-green wrap is formed on their edges. Spots expand, spread and merge with each other, turning into large spots. The disease also spreads to the stem of the plant. In this case, the internal tissues of the plant stem are also infected. As a result, the plant is surrounded by fungus from all sides. The conidiabands of the fungus are one or several and protrude to the upper part of the plant tissue. They are straight or slightly curved, brown or olive-brown in color. The bark is smooth, 25-65 x 8-22 μ m in size, numerous, longitudinally, transversely and obliquely striated.
2. Fusarium wilt – *Fusarium oxysporum* Schl. f. sp.dianthii (Prill. et. Delacr) Snyd et Hans Bulgaria, Hungary, Sweden, Czech Republic, Poland, Syria, Russia, Armenia, Uzbekistan. The fungus infects the leaves, stems, branches, inflorescences, buds and root system of the plant. External symptoms of the disease are visible from early spring until the end of the growing season. Around the conducting veins of the leaves, chlorosis spots of various shapes are formed on their edges. Later, the spots completely occupy the leaf surface. Such leaves wither, turn yellow and fall off. Transverse transection of stems and branches to see dark brown or black discoloration of conducting tissue possible A light pink foam is formed at the root neck. The most spread of the disease is observed during the flowering and budding period of the plant.



Figure 1. Powdery mildew disease

ANALYSIS OF RESEARCH RESULTS

1. R. Tramier, JC Pionnat, Bettachini Andree, C. Antonini reported in their research that fusarium wilt disease of carnation is widespread in all regions of France. Tramier René found that fusarium wilt disease was very widespread in carnations in the following years in France. In his research, the disease-causing *Fusarium oxysporum* f. sp. it is noted that dianthi. According to the researcher, this is due to some mistakes in the application of agrotechnical methods.
2. D. Ahmed considered fusarium wilt disease as one of the most common and most damaging diseases in Remontant cloves. It was recorded in England, France, Italy, Holland, USA, Germany, Bulgaria, Hungary, Sweden, Czech Republic, Poland, Syria, Lithuania, Russia, Armenia and other countries. The causative agent is *Fusarium oxysporium* Schl. f.sp.dianthi (Prill et Del) Snyder at Hansen. In addition to this species, other fungi such as *F. culmorum* WGSmith Sacc., *F. solani*(Mart) Sacc., *F. avenaceum* (Corda et Fr.) Sacc., *F. moniliforme* Sheldon, and *F. gibbosum* Appel Wollen were also recorded.

RESEARCH METHOD

of carnation plants by the following methods: determination of N₂PK by Ginzburg Sheglova Wilfus method. That is, it is determined from the vegetative and generative organs of the rose. It is determined from all body parts



of the plant. Determining the humus of the soil where cloves grow is determined by the method of Tuyurin and the method of Machigin Protasov .

SUMMARY

It is known from many years of scientific research that our flowering plants suffer from many diseases. In particular, Chinnigul studied Fusarium wilt and Alternaria diseases from diseases caused by fungi in his scientific experiments. These diseases are caused by improper implementation of agrotechnical measures. To prevent these diseases, it is necessary to feed with fertilizers containing potassium and phosphorus. Avoid excessive soil moisture, and ensure good drainage so that rainwater does not stagnate during planting. Care should be taken when using nitrogenous supplements, because their excess can also contribute to the development of the disease.

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