Agrotechnical Measures for Growing Onion Tuli Netherlands in Climatic Conditions of Namangan Region

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ABSTRACT

This article is devoted to research on the growth, development and productivity of 10 local species in 2018 and 16 rounds in 2019 introduced from the Netherlands tulip varieties. Research material - locally planted bulbs of local varieties amounted to 4500 units per hectare in 2018, 22500 introduced varieties in 2019. Before planting the bulbs, refrigeration technology was applied at a temperature of 4-5 ° C for 16 weeks. The main the objective of this study is to identify fertile onion varieties that are resistant to all climatic conditions and various diseases and by comparing local and introduced varieties to determine the most optimal options.

Keywords: View, Annushka , climatic conditions, Lighthart bloomboyien

Introduction. About 140 species of wild tulips grow in Southern Europe, Central Asia and North Africa. There are 83 species in the Central Asian republics. Kaufman, Foster and Greig tulips are the starting material for the creation of new class types.

Tulip bulbs are ovoid, conical in shape, rounded, brown, covered with a brown membrane, the base and the part where it joins the mother bulb is not covered with a membrane. Beneath the rind is a fleshy extra rind that holds a lot of nutrients, and inside it there are one or two small bulbs attached to the base. These bulbs are formed due to the nutrients of the pod shell. Sometimes two layers of outer flesh form a strong shell and serve to protect the onion from drying out, various diseases and pests. A tulip bulb consists of several concentric, thick fleshy pods, which resemble open half-cones that are inserted into each other. Among these are the buds that form the tulip flower, flower stem and leaf. They are one bud in an additional pod attached to the base of the bulb with its lower part, and then a tulip bulb will develop from these buds. The bud, which temporarily acts as a bud, is located at the base of the flower stem, which later turns into a tulip bulb.

After planting a tulip bulb, roots form around the base of the bulb, the central bud begins to sprout a lance-shaped branch that allows it to pierce the soil, the leaves become larger and larger, and the flower stem lengthens. All the shoots located between the fleshy pods begin to grow due to the nutrients in the pods and the nutrients coming through the green leaves. By the end of the growing season, only the dry membranous pods and old roots remain from the fleshy pods.

varies from 1 to 5-6 . The lower part of the flower stem has slightly larger, ovate pointed leaves, and the upper part has ribbon-like,

thickly pubescent, waxy, dark green or bluish leaves. When planted, a large onion produces one very large leaf, which then produces a rather large round onion. The flower stalk is 15-70 cm long and has a single calyx at the end. In the following years, tulip varieties appeared with bunch flowers, with several branches from the flower stem, each with 10 calyxes at the end, but their flowers are not very beautiful because they are not arranged evenly and do not open.

Tulips grow well in fertilized soil. To improve the soil composition, humus, compost is added to it, and large-grained sand is sprinkled on it. Application of non-rotted fertilizers will cause rotting of the root part of the tulip onion and the complete drying of the onion. Therefore, in the spring and summer months, the gunk is sprinkled with water from time to time and rotted. When it is time to plant tulips in October, it turns into good humus, after which the humus is sifted and cleaned from the roots of autumn crops, golden beetle larvae, and autumn nightshade.

Before planting, tulip bulbs are cleaned of brown skin and kept for 30 minutes in a 1% solution of TMTD or 0.2% pi fundozol against fungal bacterial diseases. A 0.2% solution of BI-58 is used against the onion mite.

Taking into account the size of the onion head, it is planted to a depth of 8-12 cm (considering 3 times the size of the onion head), and a little less depth in heavy soils. This is done as follows: the depth of 12-18 cm, width equal to the width of the spade is taken (it is advisable to do this with a spade with a flat bottom). The bottom of the egat is leveled. If the soil is dry, water is poured into the soil, sand is sprinkled with a thickness of 2 cm, and the onion head is picked in 2 rows, slightly pressed on the ground. The distance between rows should be 15-18 cm, and the distance between bulbs should be 8-12 cm. 25 cm from the row of planted onion heads, a new field is opened. Bulbs planted in the first layer are buried with soil.

As soon as the tulip blooms, the formation of bulbs begins. Depending on the weather conditions, the onion heads will be ready after about 35-45 days. Bulbs can be dug up after the tulip leaves begin to turn yellow, but before they are completely dry. It is dried for 7-10 days in a closed place, away from direct sunlight, it is cleaned from roots and old barks, and disinfected in fundazol, TMTD solutions. After drying, it is advisable to store the bulbs in boxes, kapron, gauze bags in dark rooms with a temperature not lower than 20°C. The flower stem, leaves and flower develop during storage of the bulb. The subsequent development of flowers depends on the optimal conditions and temperature during germination.

Currently planting tulip bulbs in Namangan region. Tulips are among the most famous spring flowers not only in Uzbekistan but also in the whole world. This flower takes center stage in the festival of flowers, which has become a tradition, especially in Namangan. In recent years, planting tulips has become popular in the streets and alleys of all cities and regions of the Republic of Uzbekistan. Therefore, the demand for tulips is increasing day by day. Many scientists around the world have conducted research on the biology, planting technology, and ecology of the tulip flower.

In 2019, there were big changes in the technology of growing flowers in Namangan region. The reason is the first large-scale project implemented on the basis of a memorandum of cooperation signed in 2018 between the Dutch company "Lightthart bloembollen VOF" and the "Floriculture Development Center" under the authority of the Namangan regional government. In accordance with this document, the Uzbek-Netherlands joint venture "Ligthartulips-Namangan" in the form of a limited liability company was established.

In this project, the first large-scale prospective project of efforts carried out by the Center for the Development of Floriculture and the Namangan Institute of Engineering and Technology was realized. Specialists of the center and scientists of the institute took an active part in the process of planting bulbs of the tulip variety brought from the Netherlands. For the plantation, according to the conclusion of comprehensive studies of experts, Tuya Taldi massif of Kosonsoi district, whose

climatic conditions meet the requirements, was selected and a 5 гектарland area was allocated from the district territory. 22,500 tulip bulbs of 16 varieties of 32 different colors were brought from the Netherlands. Specialists from the Netherlands were also invited in order to adapt the tulip to climatic conditions, to establish its care and selection . Planting of the brought tulip bulbs was carried out according to the variety, color and other natural characteristics with the help of modern equipment.

Planting tulip bulbs: tulip bulbs brought from the Netherlands were planted in cooperation with Dutch tulip flower specialist Jan Lichthart and scientists of the Namangan Institute of Engineering and Technology associate professors S.A. Misirova and I.Sh. Kurbanov. These tulip bulbs were planted for 3 days based on a number of existing agrotechnical measures from the point of view of scientific research. Of course, before planting, the soil was prepared for tulips, that is, it was necessary to use a cultivator and barone many times to prepare the soil. The process of planting tulip bulbs, since most of the soil in the territory of Uzbekistan is gray soil, special equipment (aggregate) imported from the Netherlands was used. Tulip bulbs 75 смwere planted in wide egates. The main purpose of planting tulip bulbs 75 смin the aggregates is that the special equipment (aggregate) for planting tulip bulbs is adapted to the soil of Uzbekistan and is easy to water. The process of planting tulip bulbs in the field began in the last 10 days of October 2019. Onions 25 смwere planted in 3-5 rows to a depth of 15 with special equipment (aggregate). Tulip bulbs are very moisture-loving, when the soil is wet, the leaves curl, the bulbs do not grow enough, and it is difficult for the bulbs to germinate.

Watering: Tulip bulbs do not require much water after they are planted in the ground , because it is the autumn-winter season, so they are watered once. Thus, in the spring, tulips were watered once again during the period of 2 ears of leaves. In general, in the climatic conditions of Uzbekistan, tulip bulbs are irrigated at least 3 times from planting to harvesting.

Decapitation and harvesting of tulip bulbs: In mid-spring, decapitation is carried out after making sure that the tulips are in full bloom. This means that the head of all tulips is cut off. The reason is that tulip flowers spend nutrients on their flowers to form the seed endosperm. In this case, the amount of nutrients for tulip bulbs decreases and significantly affects productivity. The main purpose of the decapitation process is to increase the number of tulip bulbs and enlarge the tulip buds. From the beginning of June, the digging of tulip bulbs begins. Due to the lack of special equipment for digging tulip bulbs in Uzbekistan, the main work was done by hand. Harvested crops were stored in cool and sun-protected warehouses until the next planting season.

In particular, over the course of 3 years, 16 different types of tulips, namely Spar red, sobel pink, Wit rode punt, Dub rw, double red with white effe, Ridgedale orange, Brown semi double, NC Pride dark lilac, Crw 18 creamwhite, 61-or-2 orangeyellow, Dana Winner white, Purple cloud, purple early blooming, Piet Paulusma yellow, Givency red with yellow effe, Lichte copex light pink, Bl 16-17o violet, are available. From the planting process to the phenological observation, to the process of harvesting onions, the most productive varieties were recommended . In S par, barbara sobel, Givency spar, barbara sobel, Givency varieties, the adaptation was not so positive, that is, the germination and productivity of the plant in the first year was usually 5-6 onions and in the 7th 9 смfraction, onions were obtained, and in the following years, tulips of this variety sprouted from the soil, were susceptible to diseases, and the number of crops was sharply reduced. So, from a scientific point of view, it is not recommended to plant spar, barbara sobel, Givency varieties that could not adapt to the conditions of Uzbekistan. NS Pride, Crw 18, Dana winner, purple cloud, piet paulusma tulip varieties planted in the climatic conditions of Uzbekistan for 3 years, watering, fertilizing and all agrotechnical measures were carried out in the same conditions as the above varieties that could not adapt. The adaptation process of these named varieties was positive every year, i.e. the

germination of tulip bulbs, the attractiveness and flatness of the crown of flowers, the greenness of the body and leaves, the productivity during the harvesting process, i.e. the characteristics of having 6-9 bulbs per head and 8th fraction were achieved 12 см. Therefore, tulip bulbs of this NS Pride, Crw 18, Dana winner, purple cloud, piet paulusma varieties are recommended for planting in the conditions of Uzbekistan. Tulip varieties that are slightly adapted to the conditions of Uzbekistan, but the adaptation process is very passive, are: wit rode punt, double row, ridgedale, 61-or-2. It is not recommended to plant these varieties for harvest.

In conclusion, it can be said that according to the results of scientific research carried out for 3 years, in the climatic conditions of Uzbekistan, tulip bulbs brought from the Netherlands, spar, barbara sobel, Givency Spar, barbara sobel, Givenchy varieties are not recommended for planting. Tulip bulbs of NS Pride, Crw 18, Dana winner, purple cloud, piet paulusma varieties are recommended for planting. This technology of growing tulips was identified as a new technology for growing tulip plantations on a large area for the first time in Uzbekistan and was recommended for production.

Below are photocopies of the planting process of Dutch tulips planted today in the conditions of the Namangan region.

Figure 1. Tulip planting process

Figure 2. Vegetation period of tulips planted for research

List Of References

1. Doornik AW Effect of storage duration and temperature on the survival of Rhizoctonia solani in tulip and iris bulbs // Neth. J. Plant Pathol.— The Netherlands . -1982 .- Vol. 88 No. 5.- pp. 185-190.
2. Juodkaitė R., Baliūneinė A., Naujalis JR, Navalinskienė M., Samuitienė M. Selection and presentation of tulip (Tulipa L.) species and cultivars to the Lithuanian plant genetic resources. // Biology . Lithuania, 2008, Vol. 54, No. 2, pp. 139-146.
3. Juodkaitė R., Naujalis JR, Navalinskienė M., Samuitienė M. Evaluation of tulip (Tulipa L.) decorative capacities and resistance to Tulip breaking potyvirus in the tulip collection of the Botanical Garden of Vilnius University. Biology . Lithuania, 2005, Vol. 51, No. 4, pp. 64-70.
4. S. Misirova, N. Melanova, I. Dzhoraev, A. Kamalov. Cultivation of Dutch tulips in Namangan region. Bulletin of Agrarian Science of Uzbekistan 2021 No. 1.
5. Kurbanov . T ulip varieties imported from the Netherlands technology of cultivation of Namangan region. galaxy international interdisciplinary research journal (giirj) issn (E): 2347-6915 Vol. 9, Issue 12, Dec. (2021)