MINISTRY OF AGRICULTURE AND WATER
MANAGEMENT OF TURKMENISTAN
TURKMEN AGRICULTURAL INSTITUTE

CULTIVATION OF ORNAMENTAL GARDENS AND FLOWERS IN THE CONDITIONS OF DASHOGUZ REGION

Scientific-production manual

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The scientific-production manual provides reccomendations based on the information of the research and development of seedlings and orchards in Dashoguz region in the field of floriculture.

Manual is intended for gardeners, landowners and for teachers and students.

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INTRODUCTION

In the prosperous period of our sovereign state, in the turning our country into a garden, in the protection of the health of the population, in the prevention of water, soil, air pollution variety of deciduous and coniferous trees has great importance. At present, under the wise lea**d**ership of our esteemed President the work of turning our country into a garden there are much works have been held. On this basis, several species of valuable and highly decorative deciduous and coniferous trees were introduced to Dashoguz region. The introduction of plants is to plant various trees for the purpose of enriching or beautifying the flora of a particular region, and for other purposes, shrubs, flowers and shrubs to be imported from other botanical and geographical areas.

Coniferous and deciduous trees adorn the surroundings its rapid maturation, drought tolerance, and purity a beautiful variety of colors, with a powerful column that grows vertically they differ. The importance of deciduous and coniferous trees in nature and in human life can be described in the following areas.

1. Coniferous and deciduous trees give Oxygen (O2) into the air during the whole year. According to scientific information, 1 hectare of forest and ornamental trees weighs 180-200 kg per day capable of releasing oxygen. But in practice, oxygen consumption is increasing. For example, the Ashgabat-Moscow flight has 5 tons of fuel per passenger and thus burns 20 tons of oxygen. To take such amount Oxigen 2-3 thousand hectares of forest and ornamental trees have to work for 8 hours or have to undergo a photosynthesis event.

2. The deciduous and coniferous trees provide the earth with oxygen (O2) and thus, as a result, they support animals and people's lives and respiration.

3. Coniferous and deciduous trees purify the air from carbon dioxide (CO2). Forests and ornamental trees breathe off every day about 220-280 kg CO2. That is why in the atmosphere there is about 0.03% of CO2.

If the amount of CO2 in the air increases, there will be appear the "greenhouse effect." That is, a portion of the sun's rays are reflected back in the form of ultraviolet rays. The CO2 gas absorbs it.

4. Coniferous and deciduous trees purify the air from dusty and poisonous harmful gases; 1 hectare of forest can absorb 30-68 tons dust each year.

5. Coniferous and deciduous trees breathe out active substances-phytoncides (about 3 kg) which are able contain harmful microorganisms. Nowadays 550 plants have phytoncides. It is known that 60 of them emit strong phytoncides the trees that produce them are plants. They are spruce, pine, cedar, biota trees. Because phytoncides kill pathogens (microorganisms), the forest and 1m3 of decorative garden air 300-400 in the air, cities and 30-40 thousand in the same volume of settlements pathogenic small organisms (microorganisms) are retained. Turkmen and virgin from the trees growing in Turkmenistan spruce, eldar pine, eastern biota, cedar, maple, greek nuts, cedars, and oriental biota belong to trees that produce more phytoncides.

6. Coniferous and deciduous trees are found in urban enterprises, different colors to reduce the noise of loud cars higher in yield, skin care and higher than agricultural crops it is also important in harvesting. That's why it's so diverse and deciduous trees are widely used in the creation of protected forest zones.

To learn various species of deciduous and coniferous trees cultivated in the Dashoguz region according to soil and climatic conditions is our main task.

Annual spring and autumn planting of seedlings at the state level across the country is carried out. This is the successful implementation of the President's policy of turning our country into a garden proves that it is being carried out.

I. ROLE OF DECIDUOUS AND CONIFEROUS TREES IN IMPROVING OF ECOLOGICAL CONDITION OF THE ENVIRONMENT

There are many interests to the policy of our esteemed President in turning Turkmenistan into a garden. The creation of green zones around the cities and rural areas of the country, the clean environment is a key evidence of the well-being of the country's citizens.

Dashoguz region is located in the lower reaches of the Amu Darya River in the north of the country. Currently, there are Murzebash, Misginata and Pig forests in Dashoguz region. Their areas are also gradually shrinking. Coming from the Aral Sea salts, harmful substances many areas of Dashoguz region part salinization, deforestation, and human has a detrimental effect on health. One of the main task to keep clean the air of cities, towns, and improving living conditions of the rural population, to keep the atmosphere clean, and improving the microclimate. In this regard, forestry in urban, district and rural landscaping works climbing should play a key role. Important in afforestating cities, towns and village’s one of the features of the tree is its biological and environmental protection. The right choice according to their hardships.

The degree of development of different species of trees depends directly on the climatic conditions of the area and the quality of the soil. Places of the trees planted in forests and orchards characteristics, their growth and development, introduction, the cultivation of arable land according to climatic conditions, the importance of science in nature and human life on a scientific basis very important to know.

The trees, which are the most beautiful of nature, and the number of ornamental and deciduous trees, have a number of important features.

They carry out photosynthesis throughout the year, increasing the amount of oxygen in the atmosphere and maintaining the constant amount of carbon dioxide.

Trees also provide air from various toxic gases and cleanses from dust. Some of the heat from the sun is returned to the Universe in the form of infrared rays. Carbon gas, water vapor, and some toxic gases return to the atmosphere absorbing the reflected infrared light, part of it

retains a large amount of heat, i.e., the greenhouse effect occurs. Permanent carbon dioxide in the atmosphere (0.03%) ensures that the temperature does not rise. According to scientific data, one hectare of forest breathes 200 people per hour in spring and summer it releases the oxygen it needs to get it and the sun absorbs 220-280 kg of carbon dioxide during Medium An adult tree absorbs 50 kg of dust and weighs about 3 kg of phytonutrients (volatile substances that purify the air from microorganisms).

Produces. Variety of coniferous and deciduous trees planted in recreation areas, parks, surrounding buildings, roadsides enriches the air with light ions. That is, 1 cm^3 2000-3000 in the forest in the area, 800 in the city parks, 200 – 400 in the industrial area and a large number of people There are about 25-100 ions in the house, according to scientific data. Light ions are heavy, combined with dust and water become ions. 1 cm3 per person It needs 25 light ions. Oxygen ionization depends on the surface, and this is the case in quantities.

Table 1

Oxygen insulation

N	**Surface characteristics**	**Quantity of light ions per 1 cm^3**
1	Forest	3000
2	Mountain	3000
3	Sea	900
4	Crop field	1000
5	Closed land with large population	25-100

Up to 3,000 meters above the ground, there is an ionization of the air to the extent of deforestation and vegetation depends on the variety. Mixed forests with conigerous and deciduous trees are the main atmospheric ionizers they do. Especially the air of adult adapted trees plays an important role in enrichment with ions. Always green when cleaning the atmosphere from dirty gases it is necessary to plant evergreen and deciduous trees. In urban areas, the area occupied by green zones should be 7-35% of the city to absorb car smoke. Large-scale green areas in cities, towns and villages the dances are air-

conditioned in them, which causes a 10-40% reduction in airborne dust (Putilov, Korpechenko, 1991). Various trees are also more important in reducing noise than deciduous trees. Deciduous trees if the bushes are able to reduce 4.2 dB, the various trees are 7-9 Db down to Trees in park zones, forests the greater the number of rows depending on the location the ability to reduce noise is high. Coniferous and deciduous trees are used as biological drains to prevent high levels of groundwater by transpiration. The afforestation of the plains is the microclimate there resulting in a reduction in soil and groundwater salinity. The release of oxygen by the photosynthesis of green plants, including trees, the ozone layer with an oxygen isotope above 20–25 km also contributes to the formation of Death to all living things ozone is a major source of hazardous ultraviolet radiation provides a living atmosphere in the atmosphere by keeping the layer.

II. IMPORTANCE of PROTECTION FOREST AREAS IN AGRICULTURAL FIELDS

The productivity of agricultural crops in agricultural fields depends not only on the care of the crop, the characteristics of the crop, but also on the structure of the soil, its water retention, physical and chemical properties, and its mechanical composition. Protect Forest zones play a key role in improving soil reclamation and improving soil fertility is large. Increased soil fertility allows for higher yields of agricultural crops.

Protected forest areas reduce the humidity by 50% plant growth by increasing to; human creates favorable microclimate conditions for working in the fields. Save 20-30% of the catch, water reduces the amount of water evaporated from the soil by 2.5 times; winds reduce the harmful effects of winds on crops. Protected forest up to 35 tons of water per hectare during the development of the strips using it to evaporate through the leaves and groundwater leads to a decrease in the level of This is the second of the soil prevents Also, arable land, populated lands, protects various structures from sand debris.

Protected forest areas in agricultural areas are created for many years. There are several types of inter-farm and intra-household forest protection zones. Interconnected protected forest zones 2, 4, 6 and more,

In-house protected forest zones are created as 4-row and double-row assistants. Usually, the forest is protected the stripes are four rows; with the wind blowing is created by default.

Rows of trees are 1 meter apart from each other when forest protection zones are created in agricultural fields.

The distance between the two rows should be three meters. That is, the care and cultivation of trees should be set up so that they can be mechanized in a normal way.

One-year, three-year-old large, rooted seedlings are used for protected forest areas, and when tree species are selected their morphological, biological and agroecological features is selected depending on. The roots of the selected seedlings should not be shorter than 25-30 centimeters. Before planting the tips of the roots should be pruned, and the injured areas should be cut off. Seedling is not a spring and autumn event. During the development period, the protection of the forest areas is their own it is necessary to conduct a complete and correct transfer in a timely manner.

Protection in connection with the soil and climatic conditions of our country acacia, pine, willow, maple, mackerel, Japanese sophora, from the mountain, instead of, rotate, igde, plum, bei, mulberry trees can be used. In saline areas, however, especially trees such as oak, willow, oak, and oak sowing is effective. In addition, the Eastern Biota, Virginia

Planting a variety of trees, such as juniper and pine trees, is environmentally useful. It is more important to plant fir-trees as East biota, Virgine juniper (fir-tree), and Eldar pine.

III. CULTIVATION OF CONIFEROUS TREES

3.1. Oriental biota cultivation

Seeds of Oriental Biota ripen in autumn in September. When the berries are cooked, they are brown, fleshy, and uncoated. During this time, the seeds are harvested for breeding. In the shade after the cocoons

have been harvested is dried and the seeds are purified from the pods and stored in cloth or paper bags at a moisture content of 8–10% until sowing time. Dock and saturated seeds are selected for sowing. Seeds purified in early February 15-20 days before sowing 0.05% manganese acid is one in potassium (margansovka) solution crushed day and night. Crushed seeds are stratified. For it 1kg of seeds in washed sand 2 kg of sand is impoverished and stored at 16–20 ° C at 70% humidity. Seeds mixed with sand are covered with 2–3 cm pure sand is covered in this way; the seeds germinate in 10–15 days.

Figure 1. East biota

Eastern biota can grow and grow in non-saline or slightly saline soils. The work of preparing the soil for sowing is autumn begins by spending the fall in the months. East biota is a drought-tolerant, hot, cold, and frost-resistant tree. Less than 20 t / ha rotted under the fall herd, phosphorus fertilizers (180 kg / ha), the total amount of potassium (70 kg / ha) is given. The lands are irrigated after plowing. In the second half of February, throne water is caught in the places where the seeds will be sown. When the lands came to a standstill then phosphorus fertilizer (135 kg / ha) and nitrogen fertilizer 120 kg / ha (1/3) given in the amount before sowing. Then the lands are overthrown and the jaws are pulled. Sowing takes place on March 20 in the first decade of April.

Then 100 kg of seeds are consumed per hectare. The seeds are sown in a linear way on both sides of the canopy and covered with a 2-3 cm layer of sand, linden and wood mixture buried. The measure is to maintain moisture in the topsoil, to prevent the formation of a hard cover on the soil, from inhibiting the rapid growth of weeds and its compaction is held for the purpose of protection.

Once the seedlings have started to grow, shading is done. This event is direct in direct sunlight in dry and hot weather protection from the adverse effects of landslides; hardening of the soil surface to prevent overheating, from the soil and from the seedlings is carried out to reduce excess water evaporation.

Measures are taken to soften the soil and clear it of weeds before the seedlings germinate and after germination. Row spacing when growing seedlings of eastern biota softening is done 1 time in the 1st year, 2 times in the 2nd year, 2 times in the 3rd year, 1 time in recent years. For the first time, softening work it reaches a depth of 2-4 cm and then a depth of 8-10 cm.

During the development of the eastern biota, the seedlings are 5–6 cm tall the 1st time when the seedlings are 10–11 cm tall is fed with zinc fertilizers. Each time about 1/3 of nitrogen (130 kg / ha) and 180 kg / ha of phosphorus fertilizer are supplied.

Depending on the weather and soil conditions, every 4–6 days, and every 2–3 days in the summer months 800 m3/ ha. Cultivated seedlings 2nd year singles. The process of isolation should be carried out after the flood or rainfall, when the soil is soft. Lonely the seedlings are planted in specially prepared areas. Without plantin before the root of the seedlings the manganese acid for an hour to dissolve the potassium is immersed and the tips of the roots are pruned before planting.

3–5-year-old seedlings of eastern biota are harvested for gardening. Seedlings are planted in the spring and autumn months. Plants are first leveled to plant seedlings, deep overturned or driven (30–35 cm deep). Pits excavated and seedlings are planted. They are cared for during development. After planting, the soil is sprinkled with sand and watered to the bottom of the seedlings so that the topsoil does not freeze. Seedlings are planted requires a lot of warm water. Therefore, in the spring, it is watered every 3–4 days, and in the summer, every 2-3 days.

It is possible to reduce the number of irrigation in recent years. During the summer, it should be watered only at night or in the evening.

3.2. Cultivation of Virgin juniper (fir-tree)

Virgin juniper seeds are kept in fall (November) or in spring (March) after harvesting; at a moisture content of 8–10% in bags. For sowing the saturated and filling seeds are obtained. The seeds are stratified 4 months before sowing. That is, 1 kg of seeds mixed with 2 kg of washed sand, It is stored for 120 days at 3–5 ° C at 70% humidity. Seeds mixed with sand are covered with 2–3 cm of pure sand.

The virgin spruce grows in unsalted, slightly saline soils. It grows with difficulty in moderately saline soils so most of them are dry. Soil preparation and sowing transfer arrangements are similar to those for sowing Eastern biota is carried out as. Seeds are sown in line on both sides of the ridge. It is planted in the form of sand and covered with 3–4 cm sand, course and wood buried with a mixture.

It's a shady job when the seedlings start to grow is held. Their job is to protect the plants from the sun woven reeds, straws and other materials is done by closing with the help of. Sharpen the surface usually 1 × 1 m to cover; 1.5 × 0.8 m; Reed knitted reeds of 2 × 1 m are used. Shading knitted reeds take root 20-30 days after the seedlings begin to sprout the neck is kept until the tree. They are in humid, cloudy weather is removed. These reed nets are attached to special pits or 45 is placed on the south side of the rows with a degree angle.

Soil softening and weed control measures done before the seedlings germinate and after germination. For the first time during the development of the virgin juniper, along the stems. At 10 cm, the second time in July nitrogen (total 160 kg / ha) and fed with phosphorus (total 200 kg / ha) fertilizers.

It is watered in 800 m3 / ha of seedlings every 3-4 days depending on weather and soil conditions.

The seedlings are isolated in the 2nd year and are placed in specially prepared areas. This case is recommended to do during the spring months in Dashoguz region.

Figure 2. Virgin juniper

After the seedlings are planted, sand is sown at the bottom, and then it is watered. There is a lot of demand for warm water the planted trees. That is, in spring months, it is watered depending on the soil and the weather condition every 3–4 days, and in the summer months every other day.

In recent years, in spring and autumn, once a week, and during the summer months it is recommended to water twice. In addition, 1-2 times during the autumn-winter months during the growing season the wet collector must provide water.

During the growing season, care is taken to develop the branches of the trees and the formation of the trunk. Once a year, remove the dried branches of the tree and take a picture of the tree refinement is underway to deliver. Because the main thing about trees it is the image of their grave that gives beauty the branches. All removed branches should be collected and taken from the growing area of the tree.

IV. CULTIVATION OF DECIDUOUS TREES

4.1. Reproduction of deciduous trees from the seeds

In all parts of Turkmenistan, including Dashoguz region also widespread, decorative, dagdan, catalpa, pine, maple, and deciduous

trees play an important role in the creation of decorative and ameliorative forest zones and they are stable to our climatic conditions.

Deciduous trees such as dagdan, catalpa, pine, and maple seeds are propagated by rods instead. Deciduous trees bear fruit in September-October. Seeds are harvested and cleansed in autumn months, Fabrics up to sowing in the spring months at a humidity of 8–10% or stored in paper bags.

Trees such as yasen, catalpa, pine, and maple are also able to grow in highly saline soils. But for these deciduous trees' normal growth there must be slightly saline or nonsaline soils. Strongly salted soils are unsuitable for growing deciduous trees, the seeds planted in these soils yield up to 10-30% germination they dry due the harmful salts in the soil over time out.

The places where the deciduous trees will be planted during the autumn months have been determined, autumn agrotechnical activities are held. It is 35 cm deep a fall (20-25 t / ha) undergrowth course, phosphorus fertilizers (70% of the annual amount, i.e. 160 kg / ha), potassium fertilizers (total annual amount, i.e. 55 kg / ha) are provided.

In early spring, i.e. in the first half of March the fields where deciduous trees will be planted, watered with growth water, to a certain extent and in saline areas, wastewater is retained. When the fields are ready, phosphorus fertilizers (the remaining 30% of the annual amount, i.e. 120 kg / ha) and nitrogen fertilizers (1/4 of the annual amount) part, i.e. 120 kg / ha) before sowing and the lands are overthrown, the joists are drawn. From the second half of March to April sowing was carried out during the first decade, for which filling and healthy seeds are obtained. The sowing seeds amount are taken according the types of deciduous trees in the range of 30 to 60 kg / ha. When planting seeds, draw a line on the joists and planted with a 2-3 cm layer of sand, lime and wood buried with. If a course and wood mixture is not found, then only sand is used. Such an agro-technical measure of the soil moisture retention in the upper layer, a hard cover on the soil to prevent the formation of weeds, the rapid growth of weeds storage and seed compaction protection, to a certain extent in saline soils where salts fall is held to prevent exit. Before the pimples sprout and soil softening and weeds after germination the cleaning procedure is carried out on a

regular basis. Deciduous trees row spacing when tree seedlings are grown softening 1st year 4 times, 2nd year 3 times, 3rd year 2 times, the last years are held 1 time. First time softening the work is 2-4 cm deep and the last time it is 8-10 cm deep is held.

a) **b)**

Figure3 flowers of Yasen (a), leaves and fruits (b)

When the height of the seedlings is 10–15 cm during the growth of deciduous trees 1st time, 40–50 cm 2nd time, 70–90 cm and for the third time in a row they are fed with fertilizers.

For the first time, 1/4 part of nitrogen is ammonium nitrate (120 kg/ha) and for the second and third time urea (130 kg / ha) is given.

In spring months the seedlings are watered depending on weather and soil conditions every 4-5 days, in the summer months every 3-4 days in the evening 800 m3 / ha. Cultivated seedlings are singled in the 2nd year. The single seedlings are specially made planted in the fields. The root of the seedlings before planting is manganese the acid is soaked in potassium solution for an hour and before planting, the tips of the roots are slightly pruned.

a) **b)**

Figure 4. Catalpa's (a) flowers and (b) fruits

The saplings of deciduous trees in our country, that is, planting in spring, in March-April is recommended. After planting the seedlings that the topsoil does not harden the bottom is sprinkled with sand and water is retained. The year the seedlings were planted requires a lot of water. So in spring months it must be watered every 4–5 days, and every 3–4 days during the summer months. Reducing the number of irrigation in recent years is possible. Watering is necessary during the summer months and during cold weather.

4.2. Derek-Tree Growing

Derek - Salicaceae Lindl belongs to the family of - *Populus L.* In Dashoguz province, he is white and black instead and tall (pyramidal) types widely planted and used in decoration. The tree 25-30 meters can grow up to, grow rapidly. A plant loves light and heat. Resistant to frost, cold, heat, and drought. Shaving, city gas-resistant under conditions. Early spring, small flowers, growth decorated with dark green, thick leaves during the horticultural importance.

It is not soil-demanding, but clay soils more suitable for growth. It can grow in saline in soils, and capable in the development of lands and in improving amelioration. It is widely cultivated and stable in Dashoguz region. It is planted by tree twigs. The rods moderately mechanized for

planting, sufficient fertile soils are selected. The optimal planting time is March.

a) **b)**

Figure 5. Derek (a) leaves and (b) flowers

1-2-year-old branches of trees are used for planting. Selected remove the leaves of the branches and make them 20-25 cm long they cut. Then there should be 2-3 shoots on each rod. Of rods the lower part is at an angle of 45 °, 7 cm below the lower extremity, and the upper cut should be cut 1 cm above the upper bud. Areas for sowing are prepared in fall. In the spring, before sowing, the lands are turned upside down and 70 cm apart is involved. The cuttings are 45 ° on both sides of the row planted. Then the distance between the rods is set to 10-15 cm. When the shoots are planted in the soil, it seems that the soil will remain 4-5 cm above the groun and the topsoil is compacted.

Watering the planted shoots from time to time and weeding is being held. Rows are also treated twice. 1-1.5 months after sowing from the stem no more than 150 cm in length two branches grow up to.

Timely on the trees instead of from the young seedlings have to do the cutting work. After the cut then mineral fertilizers should be applied, water should be taken and read should soften.

Figure 6. Planting of tree wires

The formation of many good root systems and branches of seedlings for the branches that grew in the first, second, and third years is cut off. That is, in the first year, the shoots have several shoots placing the lower part 5-7 cm long and the upper part is cut off. In the second year, the number of branches increases and their height is longer than that of the first year. Then leaving the lower part of the branches 3-5 cm high and the upper one part is cut. It has a lot of branching in the third and fourth years again make their bottom 3-5 cm, so that they cut off the top. Then the branches of the tree form more arrives and can reach a height of up to 3 meters. The most favorable cutting periods are late autumn or early spring months.

4.3. Breeding of mulberry trees from the seeds

Mulberry tree is breed from the seed, twig and method of pruning. In particular, breeding is widespread, using this method, it is considered suitable for breeding mules. Mulberry selected for breeding mulberry trees from the trees the shoots are harvested after they are fully ripe. The seeds are crushed, and extracted. The seeds are washed in clean water,

dried in the shade and sown up to 8-10% moisture content in fabric or paper bags.

The main treatments are carried out in fall. The lands are leveled and are given the fertilizer, phosphorus and potassium (rotten manure 30 t / ha, 60 kg/ha phosphorus, 45 kg / ha potassium). Then the autumn herd is passed. If the soil is salty, after the ploughing it has been cleared and then watered with washing water. Fertilizers are used after washing water (early in the spring) under the herd.

In the spring, as the weather warms up, land begins to be planted to plant the seeds of the mulberry tree. That is, the fields are plowed and watered with growth water, and then the fields are plought and the caches and leveled to 60-70 cm apart. In the conditions of Dashoguz region the mulberry seeds can be sown well in the second half of the spring or at the end of the spring.

Healthy, undamaged, filling seeds are selected for planting. The seeds are then sown in water and sown after the water has been absorbed is held. That is, mulch seeds in warm (30-35 ° C) water for 1-3 days they retain and sow after the seed has begun to swell. Because the seeds of the mulberry tree are small, the seeds are mixed with clean moist sand before planting. In this way, the mulberry seeds are sown in a linear manner on both sides of the cache ridge and covered with 2-3 cm of sand, the subject and is buried with a mixture of wood. Seed sowing rules 10– 14 kg / ha. Moisture of the soil after sowing mulberry seeds it is watered between the rows. This is the seed promotes rapid and marginal sprouting. Timely post-sowing treatment is one of the sown seeds helps to get a normal growth. That is, regular cleaning of weeds, intermittent treatments (4 times), mineral fertilizers (2 times, 60 kg / ha nitrogen, 45 kg / ha each time) with the addition of phosphorus) and agro-technical measures such as supplementary feeding are carried out in a timely manner. To weather and soil conditions depending on the spring months every 3-4 days and the summer months every 2 days 800 m3/ ha of growth water is retained in the evening.

In a 1 hectare field when breeding and well cared for 600-800 thousand root mulberry seedlings can be produced.

In soil and climatic conditions of Dashoguz region adult mulberry trees are fed at least 120 kg / ha nitrogen and 90 kg / ha phosphorus fertilizers. Also each of the separately growing columnar mulberry trees 125-250 g of nitrogen, depending on their age characteristics and 60-125 g of phosphorus fertilizers are required.

4.4. Cultivation of Leilisach Mulberry

Leylisach mulberry- *Morus alba f. pendula* belongs to the *Morus* family. This view includes 17 varieties and several hybrids. Height can be 3 meter up to. The length of its main pillar is of a certain lengt as it reaches; the lateral branches rotate and grow downwards. The leaves, flowers, and fruits of the lily are white and black similar to their species. Leilisch is used for decoration and in landscape design, ornamental plants in parks, recreation areas.

Because the mulberry seedlings grown from seed are similar to upright resembles trees. The mulberry tree is well-ripened and of good quality. The seeds are harvested from the fruit they have. For this purpose they gather the weeds and wash the seeds from the ashes.

The seeds are dried in the shade and then until next year's sowing they are kept in cool in fabric bags.

Figure 7. Leilisach mulberry

Preparation of seeds for sowing. They have to be processed before sowing to get good germination from the seeds. The seeds are crushed in water for 1-3 days to plant.

This action significantly shortens the resting period of the seed and increases its germination.

Autumn grazing is carried out in areas where mulberry is planted during the autumn months. In autumn ploughing there are used less than 60 kg / ha of nitrogen and 45 kg / ha of phosphorus fertilizers.

Sowing is done in the spring. In a 1 hectare for planting 10-14 kg of seeds are consumed. Soil for sowing seeds is being prepared. For this, the well-draped and leveled areas are 60-70 cm apart and the caches are drawn. The width of the top of the caches is 30-35 cm. The caches are filled with water and sown after the lands have been found. Seeds are sown on both sides of the cache. The surface of seeds is again covered with sand or a mixture of wood.

After sowing, the rows are cleaned of weeds and periodically watering and fertilizing. Grow water according to the weather conditions every 3-4 times in hot weather must give from the sun. After germination, the seeds should be fertilized with 60 kg / ha nitrogen and 45 kg / ha phosphorus. The mulberry is growing fast belongs to the trees. Therefore, its annual seedlings reaches 100-120 cm in height. Once the mulberry seedlings are 2-3 years old, they are sown with a growing lily leaf.

Tools specially used for threading - hammer, die wear, garden shears, and order to cut down fallen trees.

The coil is 1.0-1.2 cm wide with a polyethylene film and 20 cm long. It should be prepared in the form of 25 cm tape. You can also use a mulberry bark or a special garden wrap for ordering.

For him, a rod of mulberry is planted in a column of seedlings. Then the top is sprinkled with the thickness of the seedling column the thickness of the rod should be equal. When plugged in, the top end of the bottom of the rod must be sliced off and stacked against each other. It should be placed similarly. Then you have to wrap it in a thin layer that the air does not dry out it. After 12-15 days, they alternate with each other. Also used is the method of twisting through the bud.

During the growing season, the leylisach cares for the growth of the branches and the formation of the hat (telpek). Of trees the shape of the bubble is the basis that enhances their decorativeness is one of the indicators. So every year the trees to remove dried branches and to give a tree-like shape to carry out finishing works. Leylisach tud is cut especially as balloon shape.

V. TREE TRANSPLANTATION AND PLANTING

The size of the soil to be left outside the root when the trees are transplanted depends on the tree's 1 meter height.

The size of the soil should be increased to 2 m when transplanting very expensive large trees.

Table 2

The diameter of a tree column one meter high and the size of the soil to be left outside the root

The diameter of the pillar at a height of 1 m,cm.	The size of the soil around the root,m
2-3	0,7x0,7x0,6
4-5	0,8x0,8x0,6
6-7	1,0x1,0x0,7
8-12	1,2x1,2x0,8
13-15	1,5x1,5x0,8

The diameter of a tree pillar one meter high and outside the root the size of the soil to be raised Column 1 m high diameter, cm

The soil outside the root size, m

Once the large trees have been pruned, the outside of their root system should be secured with dead bags, with wooden implements. Their roots are for rooting large trees the outside must be dug into a thin layer. One of them has to be dug sideways. Roots that grow out of the soil should be cut off.

Once the roots of a large tree have been dug, the top of the soil the part must be 1.5 times larger than the bottom. Then the root system the stone should be nailed to wooden boards. The top of the wooden board a

hole must be inserted to remove the column. Then the tractor or the bottom of the root should be cut with a steel wire with the help of a machine. The tree fell to the side where it was dug, and the roots fell.

It must be completely emptied. With the help of lifting machines you have to load a tree into a tractor or car. Trees over 20 years old it does not fall to the side, it should be lifted and loaded into the car. Load the root system of the trees to the front recommended. The back of the car is made of wood special supports should be installed. On top of that are sacks of sand inside measures should be taken to ensure that the tree trunk is not damaged. The base of coniferous and deciduous trees 12-16 years old is around should be dug in a circular manner.

Land preparation for planting seedlings is a priority begins with leveling the soil. The main purpose of soil preparation is to create the necessary conditions for the growth and growth of various trees. Plants prepared for planting are planted at a depth of 40-50 cm. Conducting the plowing of the soil promotes air circulation, weeds, pests leads to a decrease in moisture retention and the rooting of trees contributes to the good development of the system.

First to plant seedlings of coniferous and deciduous trees pits are prepared with. When digging pits, is softened to a depth of 15-20 cm. and in sandy soils; clay soils are included in them. By growing their seedlings soils that are unfit for cultivation, e.g. soil replacement is recommended. The size of the pits depending on the age, size and size of the seedlings when the seedlings are planted, their roots are at the bottom of the pits and located 15 cm from the wall. Seedlings will be planted until they are done; their roots are covered with sacks and buried temporarily until the pits are dug. Seedling should be carried out in the fall and spring when the soil is not frozen. The roots of their roots are pruned before planting.

Once the seedlings are planted, sand is sown at the bottom, and then the water is caught. They require a lot of warm water does. That is, the spring months, depending on the soil and the weather every 3–4 days, the summer months are watered from the sun.

In recent years, spring and autumn, once a week, and during the summer months it is recommended to water twice. In addition, 1-2 times

during the autumn-winter months during the growing season the wet collector must provide water.

The main measures for the care and protection of deciduous and coniferous trees are divided into in two groups:

1. Measures to ensure the preservation the longevity and healthy of green trees- tree beauty, fertilizer, timely irrigation, soil treatment, winter preparation of trees, timely control of pests, pruning of diseased trees, etc.

2. Activities designed to enhance the beauty of plants used in orchards - cutting live fences, shaping trees, cutting down trees and shrubs pruning of branches, removal of weeds, collection of dirt, replacement of dried seedlings such measures apply.

All this work must be done taking into account the biological and decorative features of the plants.

After planting the seedlings of deciduous and coniferous trees, as well as adult are protected. All agro-technical measures should be taken in a timely manner to prevent the development and spread of pests and diseases and high-quality transfer is needed. In plant protection for the development of pests when high-quality activities are carried out unfavorable conditions arise. In the protection of trees pests collecting and destroying, collecting fleas that have fallen into diseased places, cutting off diseased and suffering dry branches, trees peeling and other work must be done in time.

VI. FEATURES OF CILTIVATION OF ANNUAL AND PERENNIAL FLOWERS

6.1. The cultivation of roses

One of the most beautiful flowers, the king of flowers **rose** is widely cultivated in all parts of Turkmenistan and is local well adapted to soil-weather conditions, cold, hot, well-known to some extent drought-resistant.

More than 1,000 species of roses and more than 10,000 species different varieties are known. But there are 250 species of roses in nature

registered. Rose is a lover of warmth, light, and moisture is a perennial shrub.

The rose can be augment by seed, and rod. The most convenient of these is the rod method of reproduction. When it increased, his mature rod is cut off in November. The rod should be 1.2-1.5 mm in diameter and 20-25 cm long. There should be 3 shoots on each rod. The lower part of the rods a sharp knife at an angle of 45 ° 7 cm below the lower extremity is cut by. The upper cut is 1 cm from the upper bud is cut above. The lower leaves are cut off and 2 leaves are placed at the top. When the wires are ready then they are planted in specially prepared soils in the greenhouse.

Soil preparation begins with the plowing in the fall. Under the herd, 20 t / ha of rotten subject is provided. After plowing, the lands are irrigated. When the lands came to a standstill then overturned and the joists pulled. Then nor is the distance between the rods set to 10 cm. Then the rod 2/3 of the soil is in the soil.

The surface of the sown soil of the rods is 2–3 cm covered with a mixture of sand, lime and wood. This measure is soil moisture retention in the upper layer, preventing the formation of hard lumps on the soil, rapid growth of weeds to a certain extent, to keep it and protect it from congestion in saline soils to prevent the formation of salts. Irrigation is carried out.

Figure 8. Flowers of rose

Also, during the growing season, soil softening and weed control are carried out. In order to maintain normal humidity inside the greenhouse, the seedlings should be watered once every 3-4 days.

The temperature of the greenhouse during cultivation is 26-27 ° C.

If there is no greenhouse for planting roses, then the rods are planted in the external environment and the surface is covered with polyethylene.

There are also more effective ways to grow roses there. One such method is with rod-growing substances works. In this way, after the rods are cut, their lower end is immersed in heteroaxis (or other growth agent), which is a growth regulator, during 24 hours. In 10 liter of water it is added 0.1 g of heteroaxin solution to prepare it. When it used this method in 14-15 days, the lroot system is formed, and in using the traditional method in the rods, the root system is formed in 30 days. In 50 days, they begin to form buds. Also, the root cause of the rods is up to 95% compared to the normal method, which is 75% of the normal rate. The lower end of the first cut rods is treated with a solution of manganese acid potassium, then aloe 12 hours before immersing in a solution of heteroxy immersed in the juice of the plant. Overnight the lower end of the rods is immersed in the heteroaxin then removes the eyes of the potato tubers; pinch the buds into those tubers, and in such a case the flower pots should be planted in specially prepared soil. For the first time, manganese should be watered with a weak solution of acid potassium. Also every 3-4 days you need to provide growth water from the sun. Once every 5 days with fresh water (2 teaspoons of sugar mixed with 200 ml of water) should be watered. The rodents extract a number of nutrients (carbohydrates, starch) from the potato tuber. Flower pots under which drainage is adjusted. Also, the surface of the soil is covered with a thin layer of sand. Later planted the surface of the rod is covered with polyethylene or glassware.

But the coating that is made should not come in contact with the leaves of the rod. The place where the flower-pots are planted so that the sprouts give a good germination should be properly illuminated. The rods will give good germination such as the humidity of the soil and the environment under the polyethylene should be normal, i.e. polyethylene to be of moderate humidity open the film from time to time, spray the water on the rods, and water the soil. In spring when the roots are well

rootedthe urethane should be adjusted to the external conditions by opening and closing the polyethylene coating, which is covered with a few leaves, for a short time every day. To do this, you must first lightly cover the polyethylene coating and gradually enlarge it, and then must be fully opened. The phenomenon of adaptation of roses to external conditions lasts 5-6 days. The first flower of the roses should be cut off.

The rose grows quickly and has its own normal neck by the next autumn. In spring, when the soil temperature is above + 10 ° C the rooted roses of the rose planted in the autumn months are in their permanent place.

6.2. Reproduction of Catharanthus flowers

Depending on the soil and climatic conditions of our country not only trees and shrubs, but also various varieties of flowering plants have been developed and widely used in ornamental gardening. Such flower plants are planted in orchards in our country, it is also possible to make a cataract plant that is distinguished by its beauty. Catharanthus belongs to the genus Catharanthus (Catharanthus) of the family Apocynaceae. It's a different kind of pink barwinok. There are 7-8 types of the annual and perennial nature of Catharanthus.

Height reaches 30-60 cm. The leaves are opposite; the surface is glossy, up to 2.5-8 cm long.

The flowers are pink in color, reddish-white in color and diameter.

Five flowers up to 3 cm in leaves. The fruit will have two sickle-shaped inner black-seeded bark. Beautiful flowers and leaves and the importance of decoration is very high. Catharanthus is grown in indoor conditions and in the open field, and is decorative, widely used.

A Catharanthus is light-loving plant. It requires a lot of water.

Moderate temperatures (15-22 ° C) are ideal for normal growth. Most importantly, when the excess amount of salts in the soil is harmful to the plant, it has a detrimental effect on the growth of Catharanthus. It is propagated by Catharanthus seeds and shoots. Most often, it is propagated by Catharanthus seeds. In April-May the seeds of the Catharanthus were strong, with good water permeability planted in the ground. Peat (70%) and sand (30%) for cultivation of Catharanthus seeds

in soil and climatic conditions of our country or in special containers in a mixture of strong clay soils they plant. The sowing depth of the seed should not be more than 1.5 cm.

When 2-3 flower seeds are planted in a pot, the flowers that grow are beautiful forms an image. When the seeds are planted at a temperature of 23-24 ° C and when watered from time to time, the plants grow for 7-10 days out. According to scientific data, seeds are sown after sowing it is necessary to darken it, so it is blac it is recommended to cover with films. But of the gardener's seeds, although not covered by polyethylene from experience gives good germination. Weather conditions for seeds sown in the womb depending on the water supply every day or 2-3 days, but do not overdo it. In growing young plants

When four leaves are formed, they are transplanted into fertile soil in special containers. 2-3 weeks after the work sprou have to be supplemented with fertilizers.

Figure 9. Catharanthus flower

In room conditions, Catharanthus as a perennial plant growing for several years, from spring to November each year flourishes and gives beauty to the surroundings.

Although a Catharanthus light-loving plant, it falls directly does not like rays. Cataracts growing in room conditions every14-15

supplemental feeding with fertilizers once a day requires. In the winter months, Catharanthus are not fertilized, they are given the amount and quantity of water is reduced. Every year in spring months are cut rejuvenation work is underway. Spring, summer, and autumn are 3 times a month it supplemented with fertilizers.

They also reproduce with Catharanthus. For it a green spider with 1-2 bunches that have not yet grown for the tree is cut off. From the upper leaves of the cut twigs the rest are removed. A root overnight for good rooting the lower end of the water pipe is submerged in a mixture of extractors is placed. They are then immersed in clean water.

In 25-30 days, it begins the shoots form buds. In the absence of production resources, it is straightforward soaked in clean water. The lower end of the cut rods is sharp. It is cut with a knife and put it into rich soil (70% peat + 30% sand mixture) and covered with glassware or polyethylene. When it is increased by this method, the temperature must be below 20 ° C for good rooting of the larvae not. It is pruned and transplanted every year due to its rapid growth when planted at home. But it is not recommended to keep the Catharanthus more than three years at home long-term development. And for some as it gets older, it will outgrow this.

6.3. Annual flower cultivation

Among the plants used in ornaments are petunia for annual flowering plants, which differ in their beauty, and stability in the soil and climatic conditions of our country, nail (calendula), kalanhoe, velvet flower, beautiful cypress, choriopsis, cosmia, ipomeya, carpet flower (orange), heliopsis.

It is possible to apply flowers such as white birch (salvia), catarrhus.

Of these ornamental flowers, petunia, carpet flowers shed their seeds every year to grow from those seeds again next year capable. Also, these flowers are almost all year round bloom and adorn surroundings. Flowers such as nails, kalenhoye, velvet flowers, and beautiful cypresses grow throughout the year, allowing their seedlings to be transplanted into orchards.

Figure 10. Velvet flower

When preparing the soil for planting flowers it is watered and normal fields are added with Potassium, Phosphorus, and Urea Fertilizers and to overthrow, and then to rake, if the flowers are sown in row, then it must be planted.

Figure 11. Nails (calendula)

Figure 12. White clover (salvia)

It is grown from petunia, nail, velvet flower, beautiful cypress, choriopsis, cosmia, ipomeya, carpet flower, heliopsis, white birch, and Catharanthus seed. Petunia and carpet flowers grow by forming pod. The length of the petunia is 30-35 cm and that of the carpet flower is 12-18 cm. Ipomeya grows on the stalks, so if it is left on the stems to be used in decoration, the green stalks, leaves, adorns her with beautiful flowers.

Figure 13. Carpet flower (orange)

Figure 13. Petunia

Nail polish, collagen, velvet flower, beautiful cypress, coriopsis, cosmia, heliopsis, white birch, Catharanthus flowers upright grows and flourishes and adorns the surroundings. The seeds of petunia, catharanthus, and carpet flowers are small, you must plant them on the ridge so that they are lightly scratched on the ground, it is recommended to cover the surface with 0.5-1.5 cm of sand. Kalan hoye flower can also be reproduced with seeds, twigs and even leaves. The seeds are small, so it is advisable to cover them with sand when sowing with seeds will be. The stems or leaves that are cut off when increased by the stems, leaves should be planted in the soil and watered periodically.

The nail flower is also increased by seeds.

The seeds are sown in 1-2 cm depth spreading out into the prepared areas. The feature of the nail is that it is a moisture-tolerant plant, so the weather is hot and dry have to water 3 times a day.

The seeds of the flower, such as the velvet flower, the beautiful cypress, the choriopsis, and the cosmia, seem to be light and winged. The germination of the seeds is good, so draw the seeds of these flowers on a flat surface. The sown seeds are covered with sand.

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