

BIOLOGICAL CHARACTERISTICS AND SCIENTIFIC BASIS OF CULTIVATION TECHNOLOGY OF UNABI (ZIZIPHUS JUJUBE MILL.)

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Abstract. This article talks about the biological properties of unabi, the conditions that are sufficient for its growth and development. Adaptation factors of the Unabi family in our republic have been revealed on scientific grounds.

Keywords: unabi, biological characteristics, active growth, grafting, growing from seeds, soil temperature, air temperature, cold resistance.

INTRODUCTION. Sustainable development of agriculture is important in ensuring food security of the population, preserving and protecting the environment. However, about 1.5 billion of the rural population make a living from household activities, and it is necessary to determine the possibilities of effective use of available resources in order to meet the growing needs of the world's population.

80% of the world's poor people live in rural areas, and their main source of income is agriculture. In this case, it is important to introduce innovative agro-technological technologies to agricultural activities, scientific justification of technologies for growing new plant varieties, financing the purchase of agricultural products (resources), and sustainable development of production efficiency.

Unabi - *Ziziphus jujuba* Mill (chilon jiyda, Chinese fenugreek, *ziziphus*, yuyuba, anab) is a valuable fruit crop belonging to the *Jumrut* family (*Rhamnaceae* Juss). Unabi is a tall (6-8 m) tree with a trunk diameter of up to 40 cm, a spreading or wide pyramidal tree, with characteristic curved thorny branches. twisted. The branches of young trees are covered with thorns, and then the thorns disappear as the tree ages. From the third order, crop branches appear, their average length is 12.5-30.0 cm, thin and able to carry all the crop. The root system is strongly developed, surrounded by thorny branches.

According to its biology, unabi is a drought-resistant, heat-resistant and cold-resistant crop.

During the 15-20 years studied as a result of research conducted in the conditions of the Samarkand region, the plumber never got cold. According to information, it is frost-resistant up to -30°C in a locksmith. $19-24^{\circ}\text{C}$ heat is required for the active growth of its shoots, at temperatures lower than $15-18^{\circ}\text{C}$, the growth slows down [6].

Fertile, light sand grows well in soils with good soil and air characteristics. In low-fertility or very fertile soils, the vegetative parts grow strongly and the crop elements are few.

UNABI CULTIVATION CHARACTERISTICS. Unabi is mainly propagated by seeds, root cuttings and grafting methods. According to some literature, it is possible to reproduce from cuttings, but it is very difficult for them to take root. The seeds are elongated, both ends are sharp, the seeds are very hard, and due to this feature, their germination is very low. Therefore, seed stratification or scarification is required. Seeds can be sown directly in the breeding field of the

nursery before winter, or stratified in moist cool soil, and a small number of seeds can be stratified in coolers. Improving the characteristics of growing and growing unabi seedlings (working with stratified seed pre-sowing stimulants, grafting shoots with eyes cut from green cuttings prepared in the mother's garden in the spring, applying organomineral fertilizers in the nursery where the shoots were grafted) and in two years the cultivation of standard seedlings and the introduction of promising varieties in the establishment of new unabi orchards is an urgent task. The individual development of fruit plants, i.e., ontogenesis, includes the period from the germination of their seeds to the death of the plant. Ontogeny is mainly accompanied by the processes of growth, development, aging and rejuvenation, which are directly related to each other [1, 6].

In fruit plants, the youth (juvenile) period begins with the release of the first leaf and continues for 3-5 years after the harvest. During this period, the plant's genetic traits and characteristics are fully formed and completed. They are not formed at the same time. At the initial stage of life, vegetative and then reproductive characters are formed. Reproductive symptoms take 3-5 years or more to develop. In this process, proper care of seedlings is very important, because during this period, their valuable characters and characteristics are formed and strengthened. Seedlings, like in the embryonic period, are very variable, tend to adapt to new living conditions [2, 6]

At the end of the youth period (after 3-5 years of yielding), the seed seedlings enter the period of productivity and maturity. During this period, plants change little, signs and characteristics are more stable and passed from generation to generation. After that, minor changes occur and are not genetic changes, but physiological changes caused by weather conditions, soil and care.

During the productive period, the above-ground and below-ground parts of plants grow to the maximum, the structure of the branches and the type of formation are formed. This period is the longest, and how long it lasts depends on the genetic basis of plants, natural conditions and methods of care [3, 6].

Fruit plants stop growing by the end of the third period of their life, the tips of their branches begin to dry, and then enter the last stage of development - senescence, that is, building. Adaptation to the external environment, regeneration (restoration) properties of plants that have lost their tendency to change are weakened. It becomes difficult to restore protein in the body, metabolism slows down. All this causes cell death and dry skin. Finally, new cells cannot replace the cells that are dying. As a result, the exchange of substances between some parts, tissues and cells of the plant is disturbed, and its physiological characteristics - growth, budding, flowering, ripening of fruits slow down, and finally the tree dries up.

The morphological and biological characteristics of the initial wild forms are manifested in the individual development cycle of seed seedlings in Chilonji. Their individual development cycle means repeating the path taken by their ancestors in a short period of time. This similarity indicates that the ontogenetic and phylogenetic development of plants is inextricably linked and interconnected. The younger the seedling, the more it resembles its progeny. The bigger it is, the more the characteristics of the parent plant are manifested. For example, in blackberry, the young seed is the thorn (a sign of wildness) of the seedlings. As the seedlings grow larger, they disappear by themselves [2, 5].

The tissue of grafted and propagated from its own root (vegetatively) is the same throughout the body, because from which part of the branch (tip, middle or bottom) the grafted bud or cutting is grafted) is obtained, the tree sapling continues the life and stage of that part. Not only during the young period of the seedling, but also during the productive period, the tissues are developed differently along the tree trunk (normal and stunted branch (and branch) shoots in the lower, middle and upper parts of the branch).

This is how important it is to choose the vegetative organs of the seedling in chilonji for reproduction. When the seedling grows up, the root buds are almost identical to the one-year seedling. The plants grown from the rhizome of the seedling reach the harvest later than the plants grown from the cuttings in the upper part of the stem, where the tissues have entered the stage of maturation or senescence, and undergo all the changes that occur in the seedlings grown from the seed [2, 3]

All types of Unabi are not demanding on external environmental conditions, especially soil. Seedlings and root buds are characterized by rapid growth. Unabi is long-lived, there are many 100-year-old trees of it in China. Unabi begins to bear fruit from 4-5 years, and from 30-40 years it becomes a fruitful tree. Unabi yields every year, there is no harvest period. 6-7-year-old trees yield up to 18-20 kg, 15-20-year-old trees up to 50 kg. It likes light, it grows separately in open areas with constant light.

In Chilonji, it is planted in the garden from one-year seedlings grafted in the spring. For this, areas protected from the wind are chosen where the sun falls. It grows in various places in Chilonji, but it is not suitable for swampy, very wet and highly saline areas where seepage water is on the surface. It can be planted in mountain and foothills in Chilonji. It does not produce good crops on low-fertility lands. Gardens are prepared in the usual way. During plowing, 10 tons of rotted manure and 100 kg of phosphorus should be applied per hectare. The feeding area should be 6x4 m for each bush in irrigated lands, 5x4 m in conditionally irrigated lands, and 3 m when planted in rows on the roadside [6].

Planting will last until March 20 in the southern regions, and until April 1 in the northern regions. Since chilonjii is a plant pollinated from outside, two or three varieties of it should be planted in the garden. Seedlings are bushed after planting.

In Chilonji, it is watered 8-12 times in the first year. When the bottom of the trunk is mulched, the number of waterings is reduced by half. In the following years, watering during the growing season is reduced until March 3, and in winter it is limited to one irrigation. Young shoots growing from the roots of plants are periodically lost. If it does not grow well after planting, in this case, 4 kg of manure, 60-100 g of nitrogen, and 50-70 kg of phosphorus are placed under each tree. It begins to bear fruit in the third year after planting. It blooms in May-July at a temperature of 22-24°C. It is pollinated from the outside, mainly by bees. The fruits ripen in the conditions of Uzbekistan in late September and early October. 50-60 kg of fruit can be obtained from one bush of Chilonji tree at the age of 15-20 [3, 4]

Seedlings are usually grown in seed nurseries. Special separate nursery areas are selected for growing seedlings. The area to be selected should be well-drained, free from weeds. The best for a nursery are non-saline, fertile, gray soils with a depth of 1.5 m.

Soils with a heavy mechanical structure, gravel, and gypsum layer on the surface are unsuitable for the nursery.

When the seed is planted in the nursery, it will grow vigorously and most of the buds will not set when transplanted into the first field of the nursery next year.

In the first field of the nursery, only high-quality conditioned seeds can be sown using high agrotechnical measures.

In order to have a well-branched root system, the growing period of seedlings is extended and the seedlings are pinched when they are young, that is, the tip of the rhizomes is cut off and transplanted into a good fertile soil. However, in the conditions of Uzbekistan, this method is rarely used, because many transplanted seedlings do not survive due to the heat of the day.

Only high-quality, well-fertilized seeds will germinate well, grow well, and ensure the formation of uniform, strong grafts. Therefore, great importance should be attached to seed preparation and storage [1, 3].

It is usually prepared when the seeds are fully ripe and of normal color; such seeds have high fertility and grow well. In the preparation of seeds of cultural varieties, the spilled fruits that ripen in the middle and late periods are used.

In order to grow cultured large-fruited unabi seedlings, grafts are grown from wild, small-seeded varieties, and next year, they are propagated by bud grafting from buds of large-fruited varieties.

In Uzbekistan, small-fruited and small-sour-fruited chilon jiida species are found, and they are considered the best varieties.

CONCLUSION. For orchards where seeds of fruit trees are grown in Chilonji, it is recommended to choose trees whose fruit ripens late, the seeds from which germinate well and grow well in the nursery. Fruit trees, on the other hand, late-growing species are discarded. First of all, the seeds taken from the selected main trees are sown in the nursery, and the grafts are grown from them, and the shoots taken from these main trees should be grafted. Seedlings grown in this way are transplanted from the nursery to the main garden. In addition, some seed trees can be concentrated among certain pollinators or transplanted to industrial orchards to replace dead trees.

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