

The study of planting of non-ringed cuttings of hybrid mulberry in the conditions of the Tashkent region

Rakhmonberdiev Vakhabjan Karimovich

Cand.PhD, Associate Professor, Tashkent State Agrarian University,

Kuchkarova Durdona Odiljon qizi

Master's degree, Tashkent State Agrarian University

Mansurova Fotima Asilxo'ja qizi,

Master's degree, Tashkent State Agrarian University,

Annotation: In Tashkent region, the possibility of growing seedlings studied of hybrid mulberry varieties from uncut cuttings. The cuttings were prepared in the second decade of February and stored in trenches 50-60 cm deep before transplanting. Cuttings were carried out in two ways. The first method - horizontal 30-40 cm cuttings buried in the soil, placing them in a row on the edges of the furrow to a depth of 7-8 cm. The second oblique method - cuttings 20-25 cm in length are left on the soil surface. Horizontal cuttings have a higher root rate than those obliquely planted

Keywords: Cuttings, horizontal laying, grooves, buds weeding, loosening, shoots roots.

In Tashkent region, experiments conducted on the methods of planting uncirculated cuttings of hybrid mulberry in the educational farm of the Tashkent State Agrarian University. Cuttings harvested in the second decade of February and stored in a trench 50-60 cm deep before planting, digging in a 28-32 cm layer of soil. The plot intended for planting cuttings plowed in the fall, and in the spring - the layout; the width of the base of the ridge is 60 cm, height is 30-35 cm. Cuttings were planted on March 24-25 in two ways – horizontal and inclined. For the first one, longitudinal grooves with a depth of 5-8 cm made on top of the ridges; cuttings placed in them and sealed with soil. With such a planting, good soil aeration conditions created for cuttings due to normal air access with a scheme of 0.70 x 40 m, about 35 thousand cuttings with a length of 30-40 cm, laid without an interval, placed on 1 ga.

When planting cuttings obliquely, i.e. at an angle of 45 degrees, one bud is left above the soil surface. With a similar method, according to the scheme 0.70 x 0.25 m, 56 thousand cuttings with a length of 15-20 cm placed on 1 ga. Watering was carried out as necessary. During the growing season, 20 watering was set, carefully monitoring the uniform moistening of the ridges. In addition, six loosening and four weeding were carried out, two fertilizing at the rate of N-120, P- 90, the first after root formation (all phosphorus and 50% nitrogen), the second a month later (50% nitrogen). From the day of planting, phenological observations made, the timing of swelling of the kidneys, the deployment and appearance of sprouted shoots from the buds of the cuttings to the soil surface, as well as the formation of the first roots noted. Fig-1. The appearance of roots in the clone CASRIIS-15 x Pioneer

The condition of the cuttings with both planting methods and all tested hybrids was good.

With the inclined method of planting cuttings, compared with the horizontal one, the swelling of the buds and the appearance of leaves began earlier, but after a while individual mulberry hybrids had single drying leaves. When horizontal, all planted cuttings developed, but here there a partial drying of shoots appeared on the surface, reaching even 20-25 cm in length.

The normal vegetation of root-related plants until autumn noted. We noted the first appearance of the roots in May, i.e. 35-40 days after planting.

They had the appearance of thin threads, but immediately differed in morphology to individual mulberry hybrids. So the hybrids Winter-Hardy x Pioneer and CASRIIS -15 x Pioneer had powerful roots.

The timing of the growth of roots and the rootability of non-ringed cuttings of hybrid mulberry (planting 25.03)

Hybrids	Date of appearance of the roots	Root of cuttings, %
Katlama x Pioneer	11.05/14.05	53/41
Winter Hardy x Pioneer	05.05/09.05	42/22
Karshi-1 x Pioneer	04.05/08.05	52/35
Katlama x casriis -14	06.05/09.05	61/39
Casriis -15 x Pioneer	04.05/06.05	51/30
Katlama x Casriis -2	09.05/13.05	47/29
Paivandi x Casriis -14	02.05/05.05	52/40
Katlama x Casriis -25	07.05/11.05	43/29
Kokusov x Casriis -25	12.05/15.05	44/27

Note: in the numerator for the horizontal landing method, in the denominator for the inclined one.

It turned out that root formation occurs differently with these planting methods. In all mulberry hybrids, crusts form faster in horizontally planted cuttings than in obliquely planted ones. Rooting also depends on the hybrid belonging of the mulberry and the methods of planting cuttings. At horizontal level, it is increased from 42 to 61 % (zero, hybrid Katlama X Casriis -14-61%, Payvan X Casriis -14-52%, Casriis -15 X pioneer-51%, Katlama X pioneer-53%), and tilt – from 22-41% (hybrid Katlama X Casriis SH-14-39%, paivan X Casriis -14-1-40 %, Katlama X pioneer-41 %).

Thus, in the conditions of the hot climate of Tashkent region, it is possible to propagate many mulberry hybrids with uncirculated cuttings. In our experiments, the percentage of rooting of mulberry cuttings during horizontal planting was significantly higher. However, in the future, we propose to conduct a thorough study to identify the optimal planting dates and the depth of embedding of cuttings into the soil with the aim of increasing their rootability during inclined planting, since this method is much more convenient when digging, storing and transplanting seedlings to a permanent place due to the compact root system.

Powerful and rapid development (annual growth of 170-220 cm) with cuttings of mulberry root plants allows you to carry out all the necessary formation techniques in one growing season with the least number of pruning's and get standard cronated seedlings.

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