

## **Agrotechnical Requirements of Preparation of Field Row for Repeated Crop Planting**

**D. B. Irgashev, PhD.**

*Institute of engineering and economics*

**O. S. Nurova, PhD.**

*Institute of engineering and economics*

**Abstract:** Effective and high-quality harvest from the vine plant is important in many aspects of row-to-row cultivation. In this case, the vine plant is not only effective in absorbing nutrients from the soil, but also effective from the cultivated area its use was considered an effective method in the fight against diseases and pests.

**Keywords:** Vineyard, repeated crop, vine plant, plant, branch, rust, bud, form, cutting, crop, soil, nutrient.

**INTRODUCTION.** Soil conservation works in gardens include the use of garden rows, tillage, watering and fertilizing fruit trees, and mulching. The main purpose of soil cultivation is to regularly increase its productivity. However, in addition to these, the garden is also used to grow as many high-quality products as possible.

Plowing between the garden rows allows to accumulate moisture in the soil and maintain the same level of moisture throughout the growing season. Therefore, it is especially useful to plow the land in places where water is scarce. The black plow improves the air and heat regime in the soil, helps the biological processes in the soil and the accumulation of nutrients, especially nitrates, cleans the land of weeds. Therefore, productivity increases after black plowing. However, if the land is left for plowing for a long time (5-8 years), the mineralization of humus in the soil accelerates, the soil structure is destroyed, the air-water properties deteriorate, the soil becomes powdery and birch bark is formed, which weakens the activity of roots and microorganisms. As a result, the trees grow slowly and the yield of the orchard decreases, dry matter is less accumulated in the fruits, and they are not stored for a long time.

### **LITERATURE ANALYSIS AND METHODS**

On steep slopes, the black plow increases soil erosion. When using garden rows, the distances between tree trunks and bushes are usually left 1.5-2 m wide. They are expanded by about 0.5 m every year. Their diameter should be slightly more than the diameter of the branches. Therefore, the distance between planting crops and planting seedlings is narrowing year by year.

If the same plant is planted between rows of a garden for a long time, its soil will be weakened in one direction, and the yield of intercrops will decrease. Therefore, one-year plants are replaced from time to time, if necessary, perennial grasses, siderates are planted between the rows or left as a black plow. The purpose of this is to increase soil fertility, help to implement the plan for purchasing agricultural products, and make full use of manpower and machinery. To the soil of the crops planted between the rows,

their demand for moisture, nutrients, and their harvesting periods are also taken into account.

Crops are not planted between the rows of a garden that has reached the harvest and the branches are connected. They are plowed, every 2-3 years gorokh and shabdar are planted as green manure. In rare cases, when fruit trees are sparsely planted, it is possible to plant sebar, shabdar and alfalfa in the garden.

When working between garden rows, it is necessary to pay attention to the fact that the soil does not become powdery, that it has good air and water permeability, and that it is cleaned of weeds. It is necessary to plow the garden between the rows, free from crops and grasses, and also soften the circles around the body and the distances between the bushes. When plowing, the soil is plowed to a depth of 25-30 cm, which should be done without damaging the tree roots. Therefore, it is necessary to determine the depth of the roots. Around the trunk of the tree, especially young trees are plowed more shallowly, taking into account that the roots are located more superficially.

Plowed lands are left in this state until spring; in such a case, decay processes in the soil will go well. In water-scarce districts, where strong winds dry out the soil, plowing is done in one way. Otherwise, the soil may become too dry and fruit trees may suffer from drought.

During the growing season, the soil should be kept soft and free of weeds. If the plowed land is ripe, it will rain as soon as it dries. If the soil is compacted, after cultivation, the soil is softened by cuttings on the surface and the resulting lumps. If plowed in the fall and when the reserve land is opened, the plow moves, and in the spring the land is worked with a disc harrow.



**Figure 1. Preparation of garden row rows for repeated cropping**

If the garden is plowed between the rows, it is cultivated in April-May after the trees bloom and the weeds grow. If the soil is too compacted and overgrown with grass, it is chiseled together with harrowing instead of cultivation. Along with cultivation and fertilizing, in the spring, the circles around the body and the distances between the bushes are softened. In summer, the garden is cultivated 2-3 times between rows. It should be worked after every rain or after watering when the soil is ripe. When it's too dry, it becomes flaky, when it's too wet, it becomes sticky, and then hardens quickly. During the growing season in the garden, cultivation between the rows can continue until the posts are placed.

A tractor-mounted garden plow, looseners, chisel-cultivator, garden disk harrow, and milling machines are used in working the garden. Viticulture is one of the important branches of agriculture, and grapes are a part of the republic. It is widespread in all regions and it is used by almost all farmers and peasant farms they grow in farms.

Favorable climatic conditions here allow the varieties of grapes to ripen in different periods gives the opportunity to grow. The adaptation of the grape plant to different conditions is different on soils: it grows well on sandy, gravelly, low-fertility, near-flowing soils and allows high yield. Grapes grow well in soils unsuitable for other plants. Great attention is paid to viticulture in our republic. Cultivation of grapes, It is one of the main components of the

preparation of dried massulants. Rich in technical varieties The complex allows you to prepare various types of wine. Area of vineyards is regularly expanding and now it covers an area of more than 150,000 hectares.

Unfortunately, for some reasons, the yield of vineyards is low, from 100 ts/ha is not increasing. To increase the yield of vineyards:

➤ new vineyards of accelerated varieties suitable for use in different directions

Create;

➤ restoration of old, low quality vineyards;

➤ introduction of new varieties into production and expansion of existing vineyards necessary.

Agricultural crops recommended for planting in the territory of the Republic of Uzbekistan 43 food, raisin and technical varieties of grapes to the State Register included. Getting a high yield from existing vineyards is largely due to inter-row cultivation depends on giving. In this case, the vine plant easily absorbs nutrients from the soil and is alien it is very useful to fight against grass, diseases and pests. It is designated for this it is necessary to conduct agricultural activities, i.e. agrotechnical activities, in a timely manner and with high quality. Agrotechnical activities recommended by research institutes should be carried out in mother vineyards. Agrotechnical activities - tillage, watering, fertilizing, vines with green parts the work to be carried out must be completed on time In newly established young vineyards, it is productive among the rows during the first 3 years can be used. In this case, vine seedlings that do not grow tall are planted between the rows of the vineyard Leguminous crops that do not cause serious problems to care agrotechnics and It is recommended to plant crops that enrich the soil composition with various useful elements. (1-picture). This will bring enough benefits to the gardener.

The vineyard soil is cultivated throughout the year. Vineyard in the period of vine rest (December-February).soil cultivation mainly consists of keeping the moisture that appears due to precipitation should be. Spring processing is to collect moisture in the soil as much as possible and use it aimed at spending sparingly. Evaporation of moisture from the soil surface in spring and summer and its consumption by plants and weeds increases (warming days as a result, 4-6 mm of moisture evaporates in one day). Therefore, during this period, the current is between the rows Cultivation and fertilizing, mulching around the bushes sharply reduce moisture evaporation (1.5-2 times) decreases. Also, excessive use of soil moisture in the surface layer of the soil It also depends on the structure and topography of the place.

According to the data, evaporation of soil moisture in uneven areas is flat it was found to be 15-30% more than other places. Therefore, deep in the spring it should not be softened, the upper layer should be leveled. Otherwise, the water balance in the soil will be disturbed possible In early spring, cultivate the soil to a depth of 15 cm, and dense soils to 30 It is advisable to draw up to cm. In the summer months, after each watering, line the vine loosening the gaps to 15 cm, fighting against weeds gives a good result. In the fall After the vines are cut and laid for burial, the vines are turned over at a depth of 30-35 cm between the rows.

is driven At this time, it is necessary to apply organic and mineral fertilizers. Soil at the time of burying the vine outside, it is necessary to turn it inside during opening in the spring. Harvested vineyards are deepened (60-80 cm.) every 2-3 years up to) softening gives good results. In this case, even rows in one year, and even rows in the second year deep loosening of the interstices can cause a lot of death of the sucker roots and vine bushes can have a negative impact on development. Roots are rejuvenated when alternated new rootlets develop from the damaged place and manage to replace the lost ones (regeneration - it takes 3-4 months to recover). The owners have a saying: "double deep loosening replaces one watering."

The vine is mainly grown by planting. Because the climate of Uzbekistan is changing rapidly, it is during winter It can be cold up to 25-300C. Therefore, vine bushes are damaged by frost they should be buried in winter for protection.

It is known from the results of the research that the vines left unburied are cold in winter years will be seriously damaged. Some regions (Surkhandarya, Kashkadarya, Ferghana). in the districts, the vine may not be buried in winter (winter frost will not exceed -15o C). vines are cut and packed before planting, and vine bushes are laid evenly along the rows and it should be buried no later than November (before it gets cold). Vine bushes infected with fungal disease (oidium) are 5% before burial Works with ISO fluid. In the southern regions, vine bushes are 15-20 cm tall, winter is cold In the Republic of Karakalpakstan and Khorezm region, with soil 40-50 cm thick should be buried. Due to the lack of snow in these areas, as a result of severe cold, the soil layer is 80-It can freeze up to 100 cm and seriously damage the root system.The vine bushes grown in the alleys are covered with materials such as reeds and rice straw soil is drawn over it. In dry lands, vine bushes are planted densely on the ground and cut vines on top of them sprouted branches are thrown away. One- and two-year-old vines are buried for the winter without being cut (they are cut and shaped in the spring).Vines affected by moderate and weak frost are not cut in spring, only shoots appear the damaged part is removed. PRVN-2,5 PRVN-3900 for burying vines, Machines and devices such as MPV-1 are used.

Opening the vines in the spring is much more complicated than burying them for the winter. His it is necessary to open the parts of the vine where the delicacy is buried without being damaged or damaged. This it must be done before the buds wake up. A layer of soil thrown over the vines PRVN-3 plow and MPV-1 machine, and the rest of the soil OVP-0.4A removed by machines (pneumatic machines). It is mentioned in order to achieve high productivity in the cultivation of quality grape products it is necessary to achieve high results at low cost in performing agrotechnical activities.

## References

1. Mamatov F.M., Fayzullayev X.A., Irgshev D.B., Mustapaqulov S.U., Nurmanov M., Hamrayeva L. Substantiation Of Loosening The Soil With A Subsoiler During Soil Processing For Sowing Melons And Gourds Under A Closed Film Tunnel// International Journal of Progressive Sciences and Technologies (IJPSAT) ISSN: 2509-0119.© 2020 International Journals of Sciences and High Technologies. – Vol. 24. – India, 2020. – P. 444-450.
2. Ravshanov K., Fayzullayev K., Ismoilov I., Mamatov S., Mardonov SH.. Irgashev D,B.. The machine for the preparation of the soil in sowing of plow crops under film // IOP Conf. Series: Materials Science and Engineering 883.
3. Fayzullayev Kh., Mustapakulov S., Irgashev D.B., Begimkulova.M Raking plates of the combination machine's subsoiler // E3S Web of Conferences 264, 04039 (2021).
4. Fayzullaev Kh., Mamatov F., Mirzaev B., Irgashev D.B., Mustapakulov S., Sodikov A. Study on mechanisms of tillage for melon cultivation under the film // E3SWeb of Conferences 304, 03012 (2021).
5. Иргашев Д.Б., Файзуллаев Х. А., Курбанов Ш. Б. Обработка почвы между рядами садов чизелом рыхлителем// Международной научно-практической конференции. Сборник научных трудов. “Автотракторосроение и автомобильный транспорт”. – Минск, 2021. – С. 265-268.
6. Иргашев Д.Б., Даминов Л.О., Муспакулов С.У. Обосновать параметры рыхлителя, для обработки между садовыми рядами// Международной научно-практической конференции. Сборник научных трудов. “Автотракторосроение и автомобильный транспорт”. – Минск, 2021. – 268-271.

7. Irgashev D.B. Agrotechnical requirements for deep tillage without turning the soil// Научное обеспечение устойчивого развития агропромышленного комплекса. Сборник материалов Международной научно-практической конференции посвященной памяти академика РАН В.П. Зволинского и 30-летию создания ФГБНУ «ПАФНЦ РАН» – с. Соленое Займище, 2021. – С. 577-580.