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CURRENT REQUIREMENTS FOR EXTERNAL ENVIRONMENTAL FACTORS

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ANNOTATION

External environmental factors affecting the current. Importance of air and soil temperature for current. Soil conditions for the vine. Humidity.

Keywords: Current, light, heat, air, humidity, soil,

INTRODUCTION

External environmental factors affecting the current are divided into a number of groups according to their origin: abiotic factors (light, heat, air, moisture, soil, topography), biotic factors (effects of other plants, symbiosis, parasitism or damage to plants by animal organisms), anthropogenic factors (methods related to plant and soil care) include site selection, winter preparation, planting thickness, fertilization, irrigation, pruning, vine cutting, growing methods, application of chemicals against diseases and pests, etc. The main factors that affect the growth, development, yield and quality of the current include light, heat, humidity, soil conditions and so on.

The process of cave formation. Light.Vine is a light-loving plant. Natural light in large open areas of Uzbekistan is sufficient for the normal functioning of the current and is 4-5 billion kcal ha per year. Light photosynthesis also affects wintering buds formed on twigs. The influence of light on the growth and development of inflorescences, flower buds, buds formed on the buds is great. Lack or excess of light slows down the development of attacks. As a result of the increase in ultraviolet light, the bumps quickly turn color. When there is enough light, the juiciness of the buds increases. In the absence of light, malic acid increases in buds, wine acid decreases, leaves turn yellow, flowers, buds, buds fall off, leaf bands, branch spacing of branches lengthens, branches become long and thin, ripen late. Also, the ripening of buds is prolonged, the sugar content is reduced, the acidity is increased, and the plant becomes cold-resistant.

Heat. Air and soil temperature are important for the vine. The sum of active (active) temperatures is very important, especially in the cultivation of sorghum, raisins and vinobop grapes. A number of training and methodological guidelines provide for perennial values of active temperature sum (2500 ° C) in the development of specialized viticulture. However, this figure is typical only for early maturing varieties in the country. Growing grapes ripening at different times lacks heat in obtaining an abundant and quality harvest. Due to this, in the organization and development of industrial viticulture, regions with a much higher sum of active air temperatures (2800-3000 ° C and more) are selected.

In addition to air temperature during the growing season, the current is also sensitive to soil temperature. At a soil temperature of 8–9 ° C begins the movement of aphids. When the average

daily temperature is 100 ° C (biological zero), the buds begin to sprout, and at 11-120 ° C they begin to sprout. An air temperature above 100 ° C is the active temperature for the current. At an average daily air temperature of 25–300 ° C vines bloom profusely, the branches grow well. When the temperature is above 38-40 ° C, the physiological processes in the vine, the growth of branches almost stops, the leaves and buds are damaged, the quality decreases. In autumn, when the air temperature is -3-5 ° C, the leaves and buds, at -8-12 ° C buds and twigs are damaged by frost. In winter, the vine branches are damaged at -18-22 ° C, and the roots at -5-7 ° C. The rust and ore parts of a well-hardened current can withstand temperatures down to -20-25 ° C. The layer of snow on the ground also helps to increase the temperature of the soil and keep the soil from freezing. In the spring, a drop in air temperature to 1 ° C stops the buds from waking up, the temperature -3–4 ° C in the cold swell buds, growing young green twigs and leaves, and at 0–2 ° C, the inflorescences die. Depending on the cold temperature of the air during the winter and the duration of the frost, the vines are divided into buried, conditionally buried and non-buried areas. In areas where the temperature is above -20 ° C, the vine can be buried, in the cold -16-18 ° C, conditionally buried, and in areas where the temperature does not exceed -15 ° C can be grown without burial.

Humidity. Soil and air humidity are important factors for the vine. When there is enough moisture, the vine grows rapidly and gives a good and quality crop. When there is a lack of moisture, all its parts develop slowly, the fruit buds shed a lot, the ripening of buds is delayed, sugar and other substances do not accumulate enough, frost resistance is reduced. The vine is especially demanding to moisture in the second period of the growing season. Because during this period, branches, leaves, inflorescences, fruit buds, buds are strongly developing, the process of transpiration is much more accelerated. In particular, more moisture is required during the ripening of buds, but excess moisture during the ripening of grapes has a negative impact on the quality of grapes, the cold hardiness of the plant, delays the ripening of twigs.

When the humidity is 70-80%, the plant grows, develops and blooms well. When the humidity is 40% or less, the opposite is observed, and when it drops to 20%, the plant dies. The optimum moisture in the soil layer where the main part of the root is located (60-80 cm) should be 75-80%. Therefore, in Uzbekistan, where summers are hot, the weather is dry and precipitation falls mainly in autumn and winter, artificial irrigation is one of the most important and necessary measures.

Soil (edaphic) conditions. Soil conditions are one of the most important factors for a vine. The construction of vineyards takes into account the quality of the soil, ie the granulometric and chemical composition of the soil, its skeleton, carbonate content, salinity. In the conditions of Uzbekistan, light, sandy, fertile and irrigated lands with light mechanical composition are suitable for vine. Improved saline, groundwater surface, stony, gray and meadow soils close to riverbeds are also suitable for vine cultivation. In very shallow groundwater (0.5-1 m), vines can be grown only when their reserves are drained using special ditches. Soils with a depth of groundwater of at least 2.5-3 m are suitable for vines. On rocky soils with a soil layer of 40-50 cm, it is possible to get a good and high-quality crop by planting vines on the basis of special agro-technical measures (application of organic fertilizers, use of green manures, deep tillage, etc.). In such lands, moisture does not accumulate much, air is well exchanged, heat

accumulates more, grapes ripen earlier, and sugar content is higher. The vine is more resistant to soil salinity than other fruit plants. The main part of the vine root grows in a one-meter layer of soil. Salts that are harmful to the plant can also accumulate in the same layer and kill the plant. Soils with a total salt content of 0.3-1% relative to dry soil, including chlorine less than 0.01% or salts less than 0.3%, chlorine more than 0.01%, are considered to be weakly saline and do not pose a risk to vines. If the amount of salts is 1-3%, including chlorine 0.01-0.2% or salts 0.3-2%, and chlorine is more than 1%, the soil is considered strongly saline and has a destructive effect on the plant. Types such as “Sape-ravi”, “Bishti”, “Risling”, “Toyifi”, “Black currant” are more resistant to salt; Varieties such as "Husseini", "Chillaki", "White Kishmish", "Hungarian Muscat", "Pink Muscat" are more resistant to salt. The chemical composition of the soil plays an important role in the cultivation of vines. Especially in carbonate soils, grape harvest and products made from it will be of better quality. The vine grows well in weakly acidic and neutral soils (pH-5-7), and poorly in acidic soils.

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