

Agricultural and technical activities in the orchard in September

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On most days of the first ten-day period of September, the agrometeorological conditions will be determined by temperatures above the climatic norms. During the first half of the period, a higher probability of precipitation is forecast for the eastern regions, leading to an improvement of soil moisture in the upper layers.

During the second ten-day period of the month, a change in the agrometeorological conditions is expected. On most days of the period, a relative decrease in temperatures is forecast, as well as conditions for precipitation in more locations in the field areas. The expected precipitation, following the deepened drought at the end of the summer, will improve the condition of the upper soil layers.

The leaf apparatus of the trees is actively photosynthesizing, providing assimilates for fruit nutrition, differentiation of fruit buds and accumulation of reserve nutrients. The more timely the fruit is harvested, the better the trees are supplied with nutrients, the easier they endure low winter temperatures and the more normally they bear fruit in the following year.

In fruit nurseries

Care for the seed beds continues – they are irrigated in case of drought and are cultivated. Care is taken to prevent the rootstocks from sprouting. The bindings used after budding are inspected and, if there is a risk of cutting into the tissue, they are loosened. Budding (bud grafting) of the rootstocks in first-year nursery blocks is completed not later than mid-month. The soil in the nurseries, compacted by the grafters, is cultivated. The soil in second-year nursery blocks is also cultivated.

Cleaning of mother plantations from off-types continues. Now is the most suitable time for identification of the rootstocks.

In fruit orchards

In order for the wood to harden well, care in young orchards is focused on timely termination of vegetative growth. In the case of prolonged drought, however, especially for pome fruits, moderate irrigation is recommended.



Harvest of autumn-winter apple and pear cultivars begins. The harvested produce is transported and sorted.

The time of fruit harvest must be determined correctly. Harvest maturity of fruits can be determined by the following complex of indicators:

- Fruit retention force. At harvest maturity, fruits detach easily from the bearing wood.
- Clearing of the colour of the skin and flesh.
- Firmness of the fruit flesh. A certain degree of maturity corresponds to a certain firmness of the fruit flesh. It is determined with a penetrometer.
- Age of the fruit. For each fruit species and cultivar, a genetically determined period from flowering to harvest maturity corresponds. For late apple cultivars it is 130–146 days, and for late pear cultivars – about 120 days.
- By starch test. The method is based on the ability of starch to stain blue under the influence of iodine. At optimal harvest maturity, 1/3 to 1/2 of the surface of the cut is stained blue.

At the end of the summer, fruits increase their weight by 1–2% per day, therefore very early harvesting leads to significant losses. Furthermore, fruits harvested early do not have the cultivar's typical organoleptic complex and do not acquire it during postharvest ripening. In fruits harvested late, the percentage of damage from physiological breakdown of the fruit flesh increases, a mealy consistency and glassiness develop.

The fruits are placed in fruit storage facilities and the cold rooms are loaded. Proper storage of the fruits is monitored. The optimal storage temperature for fruits is around 0°C , at a relative air humidity of 85–90%. The air in the cold room must be circulated. Air exchange during the first month of storage is carried out weekly, and later once or twice a month.

Harvest of late plum cultivars – Strinava, Gabrovska, Angelina – is carried out. Walnut fruits are harvested on a mass scale, and fruits of some late peach cultivars are also harvested.



Towards the end of the month, harvest of almond fruits begins. The most suitable moment is when the fleshy hull is completely open, but before it has dried and adhered to the shell.

In strawberry plantations

Where necessary, strawberry plantations – both young and old – are irrigated. Planting material for establishing new plantations is lifted and stored. Depending on the planting time, strawberry runners are lifted from the mother plantations from the end of August to the end of November.



For autumn planting, it is lifted earlier, and for storage in a cold store and for summer planting – later, but at an air temperature not lower than 0 °C. From the plants intended for autumn planting, after lifting, those damaged by diseases and pests are removed. The remaining plants are cleaned of runners and dry leaves, tied in bundles of 25 or 50, placed in crates or other containers and stored until planting, making sure that the roots do not dry out.

Plants that will be stored in a cold store are lifted and defoliated. The roots are cleaned of adhering soil by shaking or washing with water. The plants are thoroughly moistened and placed in polyethylene bags (35–40 x 45–50 cm), 500 plants per bag. In each bag, a label is placed indicating the cultivar name, class and number of plants. The bags are sealed hermetically and stored at a temperature of -2 °C. Air humidity in the cold storage rooms is maintained above 90%.

Strawberry planting material – free from diseases and pests

Autumn planting of the planting material in the new plantations is carried out. Immediately before planting, the roots of the plants are trimmed back to fresh, viable tissue, without excessive shortening. To reduce transpiration, old leaves are removed. Planting is carried out at a depth equal to or slightly deeper than before lifting, taking care that the roots are not bent and the crown is not covered with soil. The soil around the plants is

well firmed and irrigated. For early planting dates, a second irrigation is applied, and for late planting – after about 7 days. After about a week, establishment is checked and gaps from failed plants are filled. By the end of autumn, the plantation is irrigated another 2–4 times.

In raspberry plantations

Mother plantations are kept clean of weeds. Young and fruit-bearing plantations are cultivated regularly. Fruited canes are cut out, removed and burned (if this has not been done in August).

Preparation of areas for new plantations continues.

In blackcurrant plantations

In drought conditions, irrigation has a very beneficial effect. Depending on the needs, irrigation is carried out 1–2 times. The soil is cultivated regularly. Rooting beds are irrigated 1–2 times. The soil is cultivated and kept loose and free of weeds.

Areas for new plantations are prepared – fertilisation is carried out (3–5 t of farmyard manure, 80–100 kg of superphosphate or the same amount of another phosphorous fertiliser, 25–30 kg of potassium sulphate or the same amount of another potassium fertiliser per decare), followed by deep ploughing (subsoiling).

In plantations with other crops

Summer budding of Caucasian persimmon with buds from Japanese persimmon is completed. Bud take is checked and, if necessary, the bindings are loosened.

After the graft shoot of the lemon grows to a height of 10–15 cm, the rootstock is cut off without a stub above the grafting point. Small stakes are driven in to straighten and tie the shoots.



Harvest of figs continues.

The soil in plantations, seed beds and nurseries of southern crops is kept loose and free of weeds. Where necessary, it is irrigated regularly, especially for actinidia (kiwifruit). Care for green cuttings of kiwifruit, chokeberry, sea buckthorn and others, set for rooting at the beginning of July, continues.

The hardening process begins. The number and duration of misting are gradually reduced. Gradual ventilation of the growing facilities is carried out.