The usual fertilizer nutrients doses in peach orchards (for nectarine orchards too) are about 150-200 kg per hectare of nitrogen and 250-300 kg per hectare of potassium oxide (K2O). Nutrients quantities ratio depends on leaf tissue analysis and on the crop yield potential (Kremer, 1995).

In fertigation management, most of the nitrogen (60%-75%) and the whole amount of potassium are applied until the harvest. The other nitrogen dose is 50 kg per Hectare (25%-30%), It is recommended to apply on autumnal fertigation.

The question if autumnal nitrogen fertilization is efficient when taking into account that sometimes the foliage is already poor (especially in late varieties), trees water consumption is low and the tree physiological activity is low.

This question requires the knowledge of nitrogen content in the tree various organs throughout the growth season.

The peach tree's leave contained most of the tree nitrogen dose (about 40% of all nitrogen in a tree). Nitrogen is used to produce amino acids that generate the proteins in the plant, as well as an important component in the chlorophyll molecule that gives the leaf its green color. Besides the leaves, the fruit contains about 20% of all the nitrogen. Apart from these organs, the rest of the nitrogen in the plant goes to the wooden organs - trunk, branches, and roots (Rufat & DeJong, 2001).

In terms of the internal distribution of nitrogen in the wooden organs, nitrogen translocated between the various organs, supplying the demand of each part in the season. The nitrogen concentration in different wooden organs changes respectively.

At the bloom, nitrogen translocated from the root towards the developing leaves, and then to the fruit.

The nitrogen which absorbed from the outside (soil solution) by the roots, is transferred a few weeks afterward first to the leaves and it gets later into the developing fruit. During the peak of and the development of the green organs and the fruit growing process, the concentration of nitrogen in the wooden organs decreased after most of their nitrogen transfer to the leaves and fruit.

After fruit picking and before leaf fall, a reverse process takes place - the leaves are emptied from most of their nitrogen before they fall off, and the nitrogen is conveyed to the root organs. At this stage of the season, the root becomes the main storage organ. It stores, inside and out, the nitrogen it has absorbed from the soil solution and from the leaves before they fall off. The root serves as the plant's nitrogen "bank" for the leafless season (Muñoz, Guerri, Legaz, & Primo-millo, 1993; Policarpo, Di Marco, Caruso, Gioacchini, & Tagliavini, 2002).

Therefore, it seems that autumnal nitrogen fertilization highly necessary and recommended.

We recommend fertilization with the autumnal nitrogen fertilizer from the **"Blue"** fertilizer family, with a nitrogen stabilizer that greatly optimizes the nitrogen fertilizer and prevents the nitrates from leaching under the active root zone. Regarding the amounts and doses, and the question of potassium and / or phosphorus autumnal fertilization, it is recommended to consult Gat Fertilizers agronomist in your area.

Yakov Henig, Gat Fertilizers agronomist

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