Investigations on the development of some physiological processes during apple tree growth and fructification

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The apple tree plantation and environmental conditions represent a single unit, within which the mutual interdependence and conditioning are compulsory laws, with a greater influence from environment toward the vegetal organisms. The change of environmental conditions determines changes in the metabolism, within the growth and development processes, having positive or negative influences on plant health and vitality. In this scientific paper, our goal was to study some aspects concerning the ecophysiological response of Jonagold and Golden spur varieties to the climatic conditions of year 2008. Therefore, we have studied the dynamics of the leaf pigment content during the phenological phases of shoot growth, fruit growth and ripeness and dormancy beginning for one-year shoots and branches. The eco-physiological response of the two apple tree varieties was estimated according to the determination of the content of photosynthetic and flavonoid leaf pigments. The pigment content from leaves was analysed spectrophotometrically, being estimated through the light absorption capacity by the pigment acetone extract (1%) in visible spectrum and in near UV. The comparative study of the content of leaf pigments in the leaves of the vegetative and flower shoot may evaluate the various mechanisms