THE EFFECT OF DIFFERENT ORGANIC AND CHEMICAL FERTILIZER RATES ON THE QUALITY OF THE WOOD USED FOR WINDS MUSICAL INSTRUMENTS

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Abstract

The winds musical instruments are those instruments where the sound is produced by vibrating of an air column inside the instrument body. Within 2008-2012 period there was researched the effect of different chemical and organic fertilizer on the growth of plum trees planted in the autumn of 2007 year at Research Station of Targu Jiu, both as regard the trees thickness and the quality of the instruments that were made of them. All chemical fertilizers rates used have as a direct effect the increasing of the plum tree trunk thickness from 16.7 mm to 119.5 cm (N120P80K80) as compared with 16.51 to 75.00 mm (control not fertilized) the increasing of the trunk thickness being more visible when manure was applied, the thickness of the plum trunk reaching 147-148 mm. From the wood of these plum trees there were handcrafted winds instruments (flute and pipe flute) whose quality decreased as the fertilizer rate used has increased. The mark obtained when chemical fertilizer was used was 7,81 the manure applying giving better results in this respect, namely, marks between 9.02 – 9.61. The best quality of the instruments was obtained when the plum trees were not fertilized at all. The depreciation of the quality of winds instruments as a result of fertilizer applying can be explained by the fact that chemical fertilizers determine the increasing of the hormonal substances of citokinone and auxine type that stimulates the growth of the plant cells. They have as an effect the forming of thinner cell walls. The cells are, also, more elongated. These thinner cell walls of the wood determine a lower quality of the musical winds instruments.

Key words: winds musical instruments, fertilizers, manure, plum tree, citokinones, auxines