# POST-FIRE SUKCESSION IN PINE FOREST OF CRIMEA

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A comparative analysis of post-fire successions of artificial and natural pine plantations in the foothill and southern coastal regions of the Crimea after bottom fires of different intensity was performed. The young heights are close to the height of the deposit, but the number of dead trees is twice higher among artificial plantations, which is due to more intensive damage to the trunk, i.e. data on changes in morphological parameters of stands are given. Shrub tier of artificial plantations in the foothill zone is well pronounced and abundant. On the contrary, it is very poorly developed in the southern coastal phytocenoses. Almost 70 % of trees are depressed here. The dynamics of renewal of pine undergrowth is described. In general, the renewal in natural plantations is 6–10 times higher than in artificial plantations. The determinants of survival of the adolescent of different age groups are the conditions of growth and climatic factors. The absence of pine undergrowth from the age of 8 years has been revealed, regardless of the origin of the plantation due to intensive seeding of the grass stand, shortage of light content and high closeness of the main tier. Also, the shrub layer is being intensively formed, but it differs in floristic composition, taking into account the areas of research. After the fire, the succession processes are activated and mixed foliar-pine plantations are formed in the investigated climatic zones. The estimation of litter stocks in uneven-aged burners is given. In artificial stands, the volume of litter accumulation is 1.5 times higher, but due to more favorable conditions of mineralization (the amount of precipitation is 2 times greater than on the South Coast), it collapses quite quickly. The leading fraction in the composition of the litter on all burners is needles, but in artificial phytocenoses its participation is more significant. The second place is occupied by the fraction of cones, whereas in natural communities its role is extremely low, here the second place is occupied by the fraction of the cortex. Apparently, this is due to the height of the fire damage to the tree trunk. Natural plantations are more vulnerable to fire impact than artificial ones due to the ratio of the component fractions of the litter, so its decomposition, because of the greater dryness of the climate of the South Coast, is slower, and its considerable reserves are created, which easily burn out. Therefore, the organization of fire protection in protected areas is a priority for the conservation of these ecosystems.

***Keywords*:** grassland fire, pine plantations, stand vitality, overgrowth, litter supplies, climatic factors.

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