



"Green Roof" type arrangement – novelty for modern urban landscape design

SANDU Tatiana, TROFIN Alina-Elena, SAVIN Ștefana, BĂDEANU Marinela - USAMV Iasi

Vegetal roofs imply growing plants on the upper part of the buildings, thus replacing the surface taken away from nature by building that construction. Depending on the thickness of the substratum and the irrigation possibilities, there can be arranged extensive or intensive type plantations. The advantages of installing a green roof system are multiple, with a technical impact on the resistance and comfort a roof assures: ultraviolet rays protection, thermal shocks, thermal and sonic isolation, landscape impact, impact on health (improves the air quality), increases social and economical value etc. The experiments show that an extensive type vegetal roof of 15 cm height reduces the overheating of the building with 95% and the heat lost with 26% comparing to a conventional type roof. A green roof acts like a humongous sponge, diminishing the pressure from the water collecting points, thus, during the summer, depending on the plants and the thickness of the growing substratum, vegetal roofs retain 70-90% from the rainfall, and during winter, 25-40%. It is proven fact that green roof type landscape arrangements increase a construction's value, residential or commercial, with 15-20%.