



Renewable Biomass Growing in Low Fertile Land and Forest-Steppe of Ukraine

**Petro M. Skrypchuk, Anastasiia S. Shcherbakova*, Olena Y. Suduk
and Viktor V. Rybak¹**

National University of Water and Environmental Engineering, 11 Soborna St., Rivne, Ukraine, 33028,

¹Khmelnyskyi National University, 11, Instytuts'ka Str., Khmelnytskyi, 29016, Ukraine

**E-mail: a.s.shcherbakova@nuwm.edu.ua*

Abstract: For research of using the low fertile land in the Polissya and Forest-steppe zone of Ukraine, the structural-logical scheme of agricultural lands evaluation was developed. The key tool in the scheme is the procedure of environmental audit to assess the state and trends of agricultural land transformation in order to optimize its future use. The cost of straw and grain in comparison with the cost of energy willow in one year was determined. The identified trends confirm the importance of taking into account the socio-ecological and economic effects in determining the optimal use of low-yielding agricultural land. The maximum effect was obtained from the cultivation of willow for energy from Polissya zone and crop cultivation from more fertile soils from forest-steppe zone.

Keywords: Efficiency of land use, Energy raw materials, Low fertile agricultural land, Naturally restored forest stands
