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**INFLUENCE OF WAYS OF THE BASIC SOIL CULTIVATION
AND FERTILIZATION SYSTEMS
ON THE ENERGY EFFICIENCY OF FORAGE CROP ROTATION**

In crop growing annually uses a large number of logistical and human resources, and therefore of human energy. Getting high and stable yield requires of increasing non-renewable energy spending. In the conditions of growing deficit of energy resources necessary to develop such agrotechnologies that would ensure the creation of optimal parameters for growing crops, ensuring maximum use to agrocenoses of photosynthetically active radiation, and therefore reduced of production energy. Analysis of stored and expended energy allows to evaluate all agricultural processes from energy point of view and determine the effectiveness of technologies of growing crops.

Defining energy efficiency of growing crops in short rotation rear forage crop rotation at conditions of Precarpathians depending on ways of basic soil tillage and fertilization systems was carried out on experimental basis of the Institute of Agriculture of Carpathian Region of NAAS (zone of Precarpathians) during 2011–2015 in field stationery experiment in short rotating crop rotation on sod podzolic surface gleyed soil.

Among the cultures of crop rotation is the most energy-consuming is winter wheat on grain and silage corn, while growing of annual grasses characterized by high and perennial grasses are very high energy efficiency.

The highest energy efficiency ratio (generally by rotation) received on variants where plowing was carried out with loosening of subsoil (6,03–7,52), whereas in variants with conventional tillage 5,95–7,38, and with systems of fertilizer the organic system was the most effective (7,38–7,52).