Abstract
Straw originating from cereal plants served as object of study. The straw was studied as a fertilizer during a field experience on moderately eroded ordinary chernozem in the Southern region of the Republic of Moldova in order to elaborate some rational processes for its use. The application of straw had a mobilizing impact on the nitrogen and the phosphorus found in the soil. It favoured the provision of the cultivated plants with nitrogen, phosphorus and potassium. The apparent density and the coefficient of water use in the soil have been reduced and the plant productivity has increased. The organic matter contained in the straw constitutes 820 kg/t and possesses an energetic potential of 4.4. Gig calories/t. In the Republic of Moldova, the straw is the only re-generable resource which possesses the highest potential to break up, to structure and to increase the soil capacity for water and air. Each ton of straw, applied as fertilizer, favours the completion of humus reserve in the soil by about 150 kg and that of nitrogen by 8 kg.

Key words: straw, fertilizer, eroded soil, ordinary chernozem