CASE STUDY ON THE ELABORATION OF FERTILIZATION MANAGEMENT ON A FARM IN PRUT VALLEY – IASI COUNTY

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Abstract

Agrochemical mapping aims to monitor soil fertility to determine fertilizer requirements and includes field research, laboratory determination and mapping of the distribution and range of pH and essential nutrients by conventional signs and colors. Soil fertility is its fundamental and specific ability or capacity to provide plants with the necessary and balanced amounts of nutrients, permanently and simultaneously, in the context of the other vegetation factors (water, light, temperature, other physical and biological factors). Basically, fertility results from the complex and dynamic interaction of soil constituents (primary and secondary minerals, clay minerals, humus, salts, etc.) with some physical properties (texture, structure, aerobic regime) and other soil-specific processes (humification - mineralization, adsorption - desorption - ion exchange, solubilization and nutrient cycling between ecosystem components). The composite agrochemical sample consists of a number of subsamples, as follows: 25 for uniformly fertilized soils, 30 for weakly and moderately eroded soils and 40 for strongly eroded soils, non-uniformly fertilized, depleted and organic soils, soils from orchards, greenhouses and solariums. Geomorphologically, the territory of Probota village belongs to the Moldavian Plain. This geomorphologic unit is a broad-veined hilly plain consisting of more or less fragmented hilly interfluves. The Moldavian Plain is of sculptural origin, formed in the presence of a slightly erosive sandy-clay substratum, unlike the oolitic sandstones and limestones of the neighboring regions. The land is situated in the Prut valley, bounded on the long side by drainage canals, and another partly divides the plot in two. The altitude is between 39 and 41 m.

Key words: fertility, agrochemical mapping, soil, nutrients