The use of spatial and numeric databases of digital orthophotomaps in soil quality evaluation papers

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In the period between 2003-2007, digital and analog orthophotomaps at a scale 1 : 10 000 were designed for a series of territorial administrative unities, based on aerial photogrammetric methods. The use of the digital support of the orthophotomaps facilitates the retrieval in real time of primary technical data for the cadastre general of the graphic fund of agricultural physical blocks and their contained plots. Within the grounds of the administrative territory of Bilca, in Suceava County, 315 physical blocks have been identified, with a total area of 2000,43 ha. According to the nature of the physical blocks 189 agricultural physical blocks (AB), occupying an area of 1853,81 ha have been delimited in the unincorporated area of the territory and 126 physical blocks (SA), in the residential area, with a surface of 146,62 ha. On the digital format of the orthophotomap, at a scale 1 : 10 000 of the physical blocks, an overlap was carried out of the thematic layer with the graphic entities of the 24 soil unities (SU), at a scale of 1: 10 000, identified and mapped on an agricultural area of 1358,14 ha. For the organisation, collection and validation of the technical data necessary for the cadastre general and the quality of the soils, has been considered an area of 100,4628 ha of an agricultural sector. The overlapping of the data layer of the soils map, one that included a spatial distribution for 10 soil units (SU) has been carried out on the digital support of the six agricultural physical blocks and the 228 cadastral plots, respectively. The interrogation of the relational model of the digital orthophotomap spatial and numeric database, according to the codes of the physical blocks and the cadastral plots respectively, enables the use of this type of data in various scopes. The informational model is based on the univocal relations between the graphic entities of the 228 cadastral plots and the specific attributes of the cadastre general entities and the descriptive and analytical data of the soil resources quality, respectively.