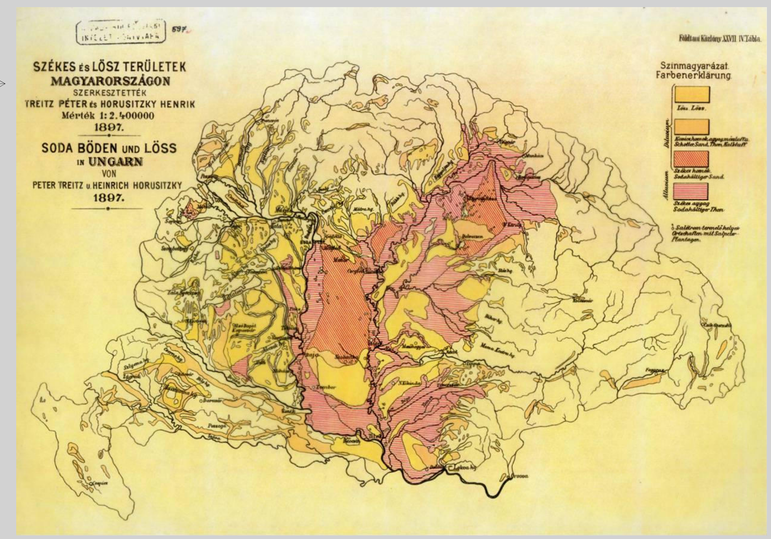
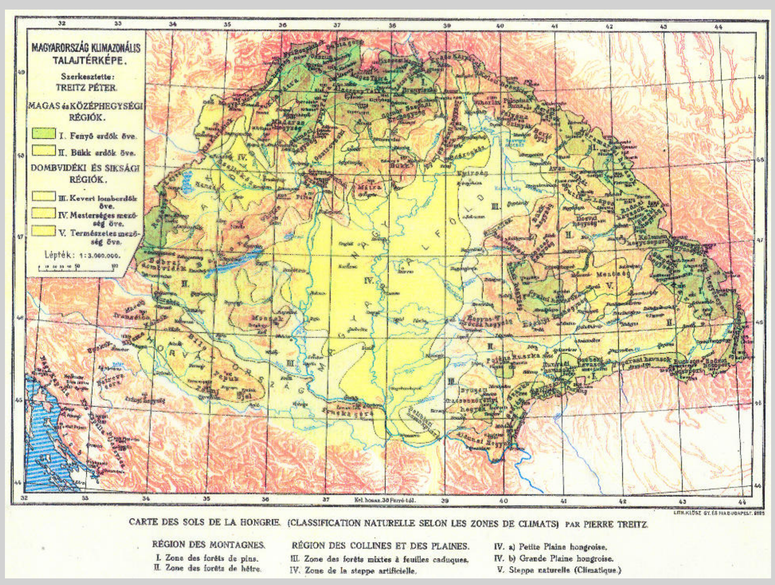
Agrogeology in the Geological Institute of Hungary

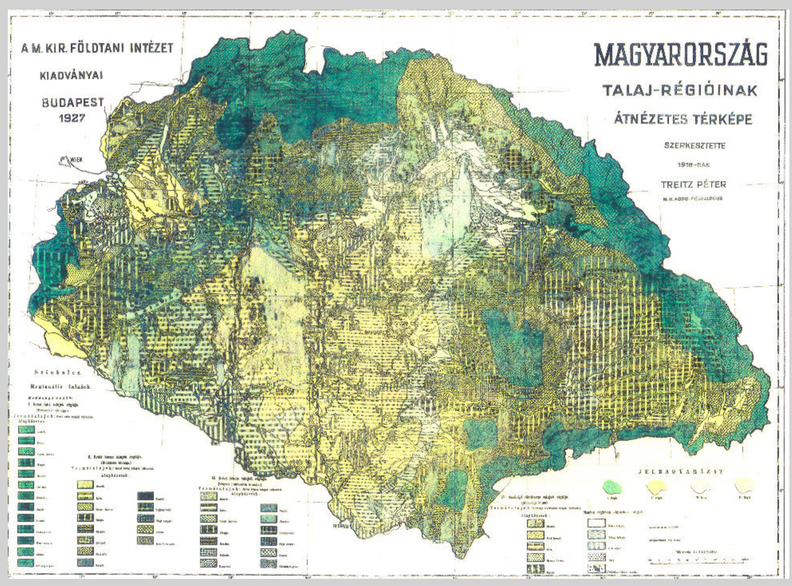
In the 1800's focused agrogeological research was started in Hungary, associated with the geological investigations of areas covered by young, loose sediments. Geological and geographical methods were used from the direction of parent material to soil.
In 1886 József Szabó urged in the Geological Association to complete a national soil survey in the framework of a geological mapping of the country. The "Agronom-geologic" (Agrogeology) Department of the Geological Institute of Hungary was established in 1891 with the leadership of Béla Inkey, who was a well known geologist and landowner. His co-worker became Péter Treitz, a teacher of the Agricultural University at Magyaróvár.

1891-1909

In the first year Inkey completed the first agrogeological map about the surroundings of Pusztaszentlőrinc in Pest County. On the map the superficial formations, the rock development of those and soils were also represented. In the following four years other agrogeological maps were created mainly on the Great Hungarian Plain, and later the work was extended to the other parts of the country. In 1897 Inkey resigned as head of department because of professional dissents, but agrogeological research was going on, more and more to the direction of soil survey separated from geology.







1909-1933

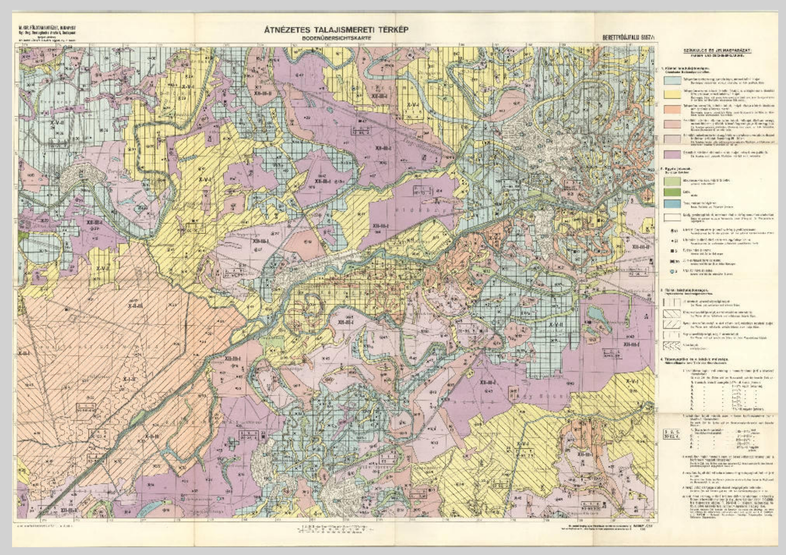
The turning point of the Hungarian agrogeological research was the I. International Agrogeological Conference held in 1909 in Budapest in which Inkey was the secretary. In this conference participating experts declared unequivocally: considering the mapping of a country priority must be given to overview map that should be published at small (ca. 1:200.000) scale. It should serve as the basis for following detailed mapping. This concept got fundamentally changed the work of the Agrogeological Department, since the compilation of the national pedological overview map was started. The original name of the Department was used still a long time, but the lowland mapping and pedological research were already separated in the Institute and they developed apart from each other.

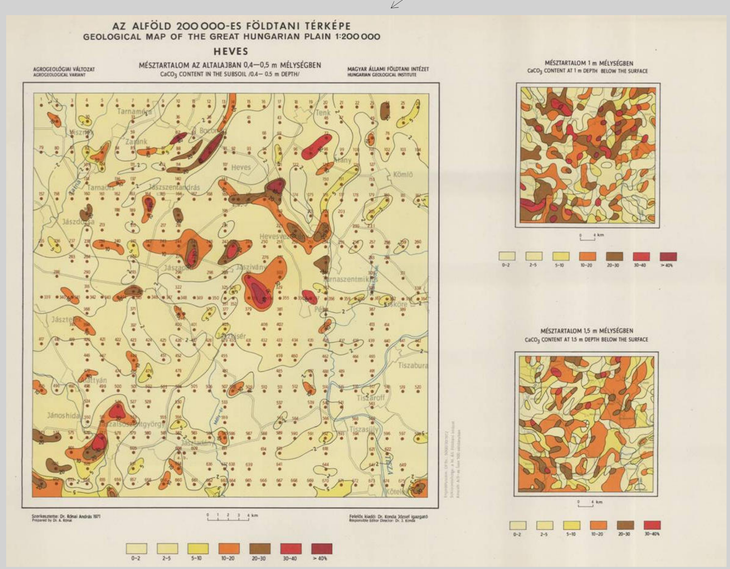
1933-1949

In the 1930's a new 1:25 000-scale mapping program started under the leadership of Lajos Kreybig with detailed sample taking and thorough laboratory analysis of the collected samples. Data, at least from one exploration, could be used from every square kilometre of the country. These maps were neither clearly geological maps nor soil maps. They interpret pedological and landuse relations (i.e. cultivated land, temporary wet area, wetland, forest, lake, reed, river, settlement) together.

1949-1985

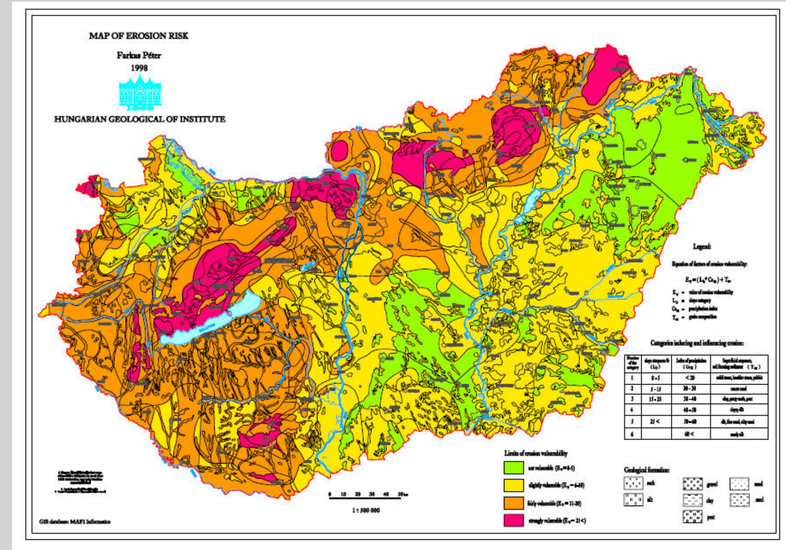
A new turning point was the recognition of József Sümeghy, who notes that pedology and geology have a number of common, still unresolved problems and geological survey is necessary in agricultural practice. He also called attention to the importance of groundwater in connection to soil and subsoil.
Following the work of Sümeghy, András Rónai became the new head of Lowland department. In 1964 he launched the mapping program of the Great Hungarian Plain foreseen for 20 years. One of its tasks was already the compilation of agrogeological map variants. He was mainly interested in the calcium-carbonate content and the permeability of the superficial formations.
In the 1970's and in the beginning of the 1980's the Regional Geological Services, with the leadership of Tibor Zentay, focused on the exploration and analysis of raw materials suitable for soil-melioration.





1985-

According to the new agrogeological research program of the Geological Institute of Hungary (started in 1986), agrogeology studies those geological characteristics and geological processes of near surface formations that have primordial importance for agricultural production, that influence the condition of the agricultural cultures, that provide information on the soil and parent rock constituents, on the location and quality of groundwater, the salt contents which are determined by groundwater movements, changes on the surface due to human and natural causes below the soil level. Therefore, agrogeology examines not only the surface but the complexity of near surface formations, the relations of the soil-parent rock-groundwater system, furthermore the changes of this system due to human intervention, as well as predicts the positive or damaging consequences leading from them.



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Bridging the Centuries
1909–2009

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