

INVENTORY AND CHARACTERIZATION OF THE WORLD-SOILS State and difficulties of correlation problems

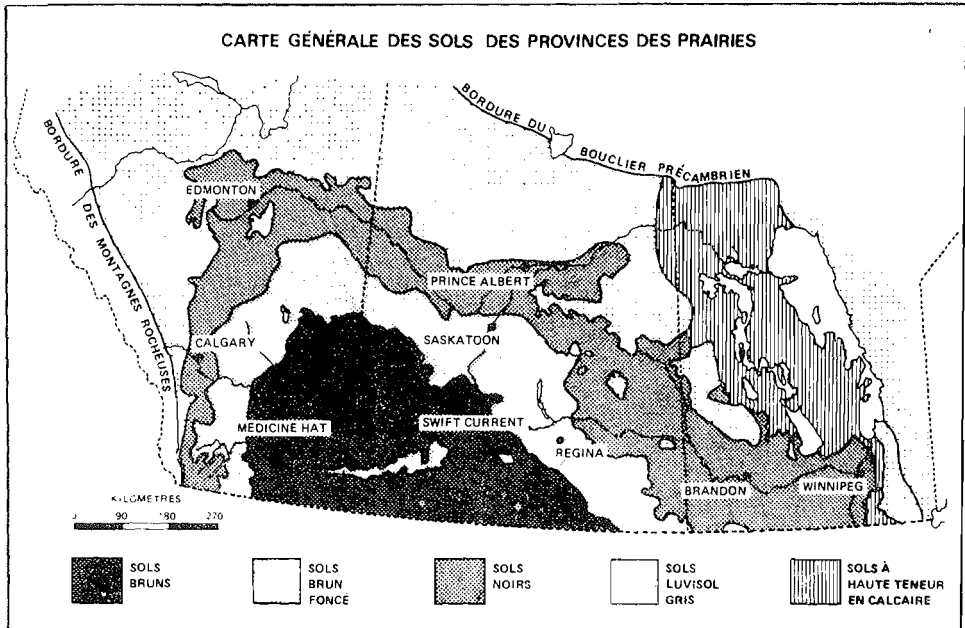
G. PEDRO ⁽¹⁾, M. JAMAGNE ⁽²⁾, J.-C. BEGON ⁽²⁾

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Referring to Dokuchaev's ideas and the zonality law, the authors set that any comparative analysis must lie on a fundamental basis: the knowledge of the geographic distribution.

Then comes a brief historical review on to the most isolated continental areas. Spread over a century, expeditions, road and railroad networks, fuel and gas conveyance, have allowed a constant increase in the knowledge of those region's soils.

Afterwards, they show how pedologic conceptions of Dokuchaev can be extended to the different parts of the earth and how concepts are progressing. For areas similar to those studied by Dokuchaev, western Canada for instance, some adaptations have been done without serious problem.



Discovery of "russian" soil types in Western Canada

A widening of these conceptions led to introduce notions of time, age and history and thus a distinction between young covers in regions of high latitude, and old covers in intertropical basement regions, with the more complex middle state of medium latitudes. The concepts of soils in equilibrium, of paleosols and relict soils have then appeared.

Progressively, ideas on mostly vertical evolution have been replaced first by notions of lateral evolutions, and finally by those of global transformation of the pedological cover.

(1) CNRA - Route de Saint-Cyr, 78000 Versailles.

(2) INRA-SESCPF - Ardon, 45160 Olivet.

The authors then analyse conditions of setting up a world pedological document. Successive approximations have been realised, leading to a world synthesis at 1/5 million scale from the FAO.

It consists of a serious inventory, which is, of course, approximative, but giving for the first time quantitative indications on the world soil resources and, thus, permitting a global estimation relative to the nature, the distribution and the extension of "great soil types".

The international legend comes, of course, from a compromise between different views of pedology. This compromise is not really a scientific type work, the correlations having been done essentially on the base of similarity researchs through bibliography, without real confrontations in the field.

Some attempts in helping coordination are than mentioned, for example :

- Attempt, limited to some great soil types, but made in details, as that realised in the framework of a pedological cooperation between USSR and France on the theme : comparison of leached and derno-podzolic soils.



Distribution of french leached soils and derno-podzolic soils

- More general, attempt taking in account the different great soil types of the world, built in the framework of an international cooperation initiated by UNEP : "International Reference Base for Soil Classification" program, now directed by ISSS.

Pedological inventory works at the earth level have been of great importance for the development of Soil Science : they have showned, in particular, that from soils point of view, the earth surface composes a coherent and organised whole.

Finally, the authors show the necessity of successive synthesis from detailed analysis of pedological cover, and, if possible, conducted either in common by scientists coming from different thought, either by the same pedologists in very different physiographic regions.

That kind of scientific works would be developped in future.

In pedology, as in other sciences, real concertation seems to be the best promise for future success.