

MAIN SOIL FACTORS INFLUENCING THE PLANT GROWTH IN EUROPE

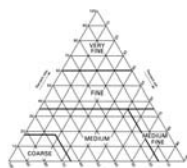
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Data included in soil databases can serve as direct or indirect indicators of plant growth conditions. This information includes soil, as well as non soil data. An example of such type of data collection is the 1:1M soil database, which represents the result of cooperation among the European Soil Bureau Network (ESBN) and the European Commission. The database is build up from 4 components:

- The Soil Geographical Database of Eurasia at scale 1:1M (SGDBE)
- The Pedotransfer Rules Database (PTRDB)
- The Soil Profile Analytical Database of Europe (SPADE)
- The Database of Hydraulic Properties of European Soils (HYPRES).



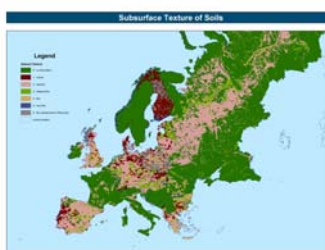
Texture classes (after CEC, 1985)

Class	Description	Evaluation
0	No texture	Peat soils
1	Coarse	18% > clay and ≥ 65% sand
2	Medium	18% ≤ clay < 35% and ≥ 15% sand, or 18% ≤ clay and 15% ≤ sand < 65%
3	Medium fine	<35% clay and <15% sand
4	Fine	35% ≤ clay < 60%
5	Very fine	≥ 60% clay

From this database soil texture, depth of obstacle for roots development, presence and depth of impermeable layer in soil profile and soil water regime evaluated as dominant annual average water regime class were chosen for soil limitation for plants growth evaluation.



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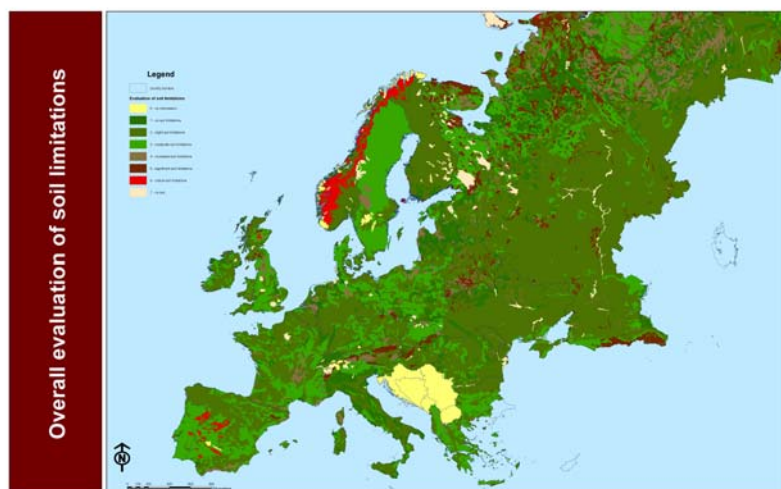
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References

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- Finke, P. *et al.* 2001. Georeferenced Soil Database for Europe. Manual of Procedures, ver. 1.1. EC, EUR 18092 EN. 166p.
- Lambert, J.J. *et al.* 2003. Soil Geographical Database for Eurasia & The Mediterranean : Instructions Guide for Elaboration at scale 1:1M, ver. 4.0; EC, INRA, EUR 20422 EN, 60p.

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