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Short communication

*SOIL*PAR 2.00: software to estimate soil hydrological parameters and functions

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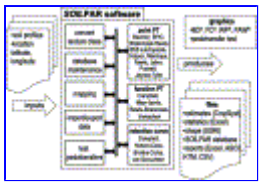
Abstract

SOILPAR 2 is a program for estimating soil parameters. It allows: (1) storing soil data in a georeferenced database, (2) computing estimates of soil hydrological parameters using 15 procedures, (3) comparing the estimates against measured data using both statistical indices and graphics, and (4) creating maps using the ESRI format. An interface to/from Excel and CropSyst is provided. Eleven methods estimate one or more of the following characteristics: soil water content at predefined soil matrix tension, saturated hydraulic conductivity, and bulk density. Three methods estimate the parameters of well-known soil water retention functions (Brooks-Corey, Hutson-Cass, van Genuchten), and one estimates both saturated soil hydraulic conductivity and the soil water retention curve parameters (Campbell). The software runs under Windows 98/NT/2000/XP and is freely downloadable via internet.

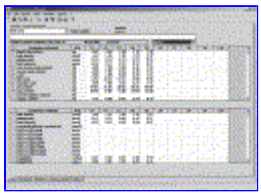
Author Keywords: Pedotransfer; Soil database; Method comparison

Article Outline



(22K)

Fig. 1. Components of the program . [1]Bulk density; [2,3]soil water content at field capacity and wilting point; [4]plant available water.



(75K)

Fig. 2. Screen of the data entry procedure.

Table 1. Point pedotransfer methods available in (<1K)
All methods can be applied using at least three classes PSD. The Campbell method is the only one which can take advantage of the seven class PSD.

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