wageningen soil conference

MASTERCLASS

M27: New soil bulk density sensor in comparison with conventional measurement techniques

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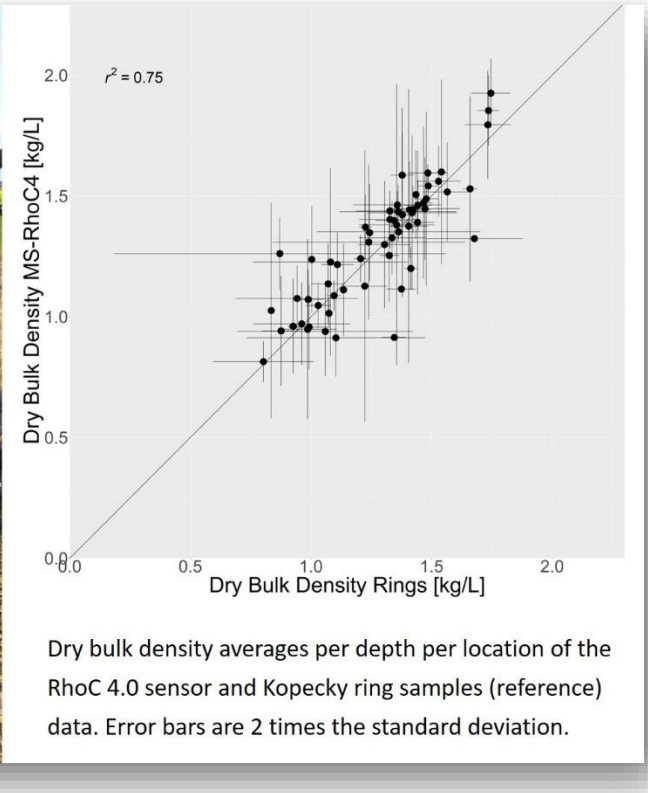
Short description:
Soil compaction and soil bulk density are gaining in importance as soil parameters. On their own for soil water infiltration, retention and rootability properties related to food production and climate change adaptation, but also as input to soil carbon content calculations and pedotransfer functions. The standard measurement with rings is labour intensive and therefore expensive, sensor approaches require extraction of the soil core and are not widely used. As a possible solution to this challenge Medusa Radiometrics in 2017 have redesigned their earlier version of a soil bulk density sensor for in situ measurements on tidal flats, the RhoC or MS-Rho sensor, to make it suitable for in situ full soil profile measurements of bulk density every 5 cm up to 1 m depth, without the need to extract the soil core. All available measurement techniques will be discussed and demonstrated.



Dry bulk density averages per depth per location of the RhoC 4.0 sensor and Kopecky ring samples (reference) data. Error bars are 2 times the standard deviation.

Theme: Advances in measuring and modelling soil processes
Keywords: soil bulk density sensor measurement
Type of masterclass: Other, Tutorial combines with discussion and field excursion.
Maximum number of participants: 20

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