

## ***Interactive comment on “How serious a problem is soil compaction in the Netherlands? A survey based on probability sampling” by Dick J. Brus and Jan J. H. van den Akker***

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Dear Florian, many thanks for your valuable remarks and questions. Below some answers.

We will give some more detail about the threshold in the revised paper

Then your question about the 45% overcompacted soils. This is 45% of the target population, and so it will be slightly smaller for the entire Netherlands, see Figure 1 (grey area) which part of the Netherlands was excluded. The target population excludes:

a. build-up areas, glasshouses, infrastructure (roads), water

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b. soils with peat at about 20 to 25 cm below surface. So peat soils with a mineral topsoil are NOT excluded.

c. naturally compact subsoils, such as boulder clay soils, 'knipkleigronden' and others

The area of the soils of category b is about 4.5%. The estimated total area (a, b and c) is about 5% to 6% of the area of the Netherlands.

Then your question about the sampling depth when no plough layer was present, for instance in uncultivated soils. When it was not clear at what depth the subsoil was compacted, both in uncultivated and cultivated soils the decision was based on the measurements with the penetration resistance as measured with a penetrometer.

Finally your question about traffic lanes and headland of arable fields. Sampling sites were randomly selected, and selected sites in these parts of the fields were NOT excluded.

I hope this answers your questions.

best wishes

Dick Brus

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