

### DDE Supplement / Attachment

<b>DDIdentifier<sub>(10)</sub></b>	<b>DDName</b>
470	Soil Compaction

Version 1.0

## Soil Compaction

Soil compaction is a decrease in the porosity of a soil due to stresses, both external (e.g., vehicle traffic) and internal (e.g., decreasing organic matter content, natural soil reconsolidation). Compaction must be monitored, because it strongly and adversely impacts the beneficial processes that take place in the soil. This DDI provides a simple qualitative scale for evaluating soil compaction; it uses a knife, as opposed to specialized equipment such as a cone penetrometer.

Note, however, that the results of evaluating soil compaction by the proposed knife test (or other mechanical method) depends on the moisture condition of the soil. Therefore, a proper evaluation of soil conditions requires recording both this DDI and DDI 469 (Estimated Soil Water Condition). Also note that the "Estimated Soil Water Condition" DDI does not cover conditions in which the ground is frozen or snow-covered. For those situations, please use DDI 468 "Soil Snow/Frozen Condition" instead of "Estimated Soil Water Condition".

**Source:** ISO 25177: 2008. Soil quality – Field soil description

#### Enumeration:

<b>Id</b>	<b>Code</b>	<b>Description</b>
1		<b>Loose</b> Uncompacted material; a knife penetrates easily up to the hilt.
2		<b>Slightly compacted</b> A slight effort is required to insert a knife into the soil.
3		<b>Compacted</b> A knife does not penetrate completely, even with considerable effort.
4		<b>Very compacted</b> It is impossible to insert a knife more than a few millimeters.



**ISO 11783-11  
Mobile Data Element  
Dictionary  
DDE Request Form**



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