

step 10

DETERMINING TOPSOIL DEPTH

Conducted in the paddock

You will not identify any land classes in this step.

You will need:

Property plan
 Overlay 1
 Blue permanent marker
 Red permanent marker
 Shovel/auger
 Ruler

Note: Steps 10 and 11 should be conducted together. It is more accurate if you conduct them in the paddock by digging a hole to at least a depth of 20 cm.

The topsoil is the area where most of the nutrients accumulate, and therefore the deeper it is, the better it is for agriculture.

Shallow topsoil is less than 10 cm and deep topsoil is more than 10 cm.

A simple way to identify the topsoil is by colour. Due to the high levels of organic matter it is usually the darkest layer of soil. Measure the depth of topsoil to the point where the soil underneath becomes lighter in colour or the texture changes (usually becoming more clayey).

In some soils the colour is consistent throughout. In these soils there is commonly a difference in the structure of the topsoil and the subsoil. Often when you dig holes, you can feel a change in the structure of the soil, for example it may become harder to dig. This is often when the subsoil begins.



Figure 25 Digging a shallow hole to assess the topsoil properties.

Step 10: Topsoil depth

When digging holes be careful not to take samples from disturbed areas, such as sheep camps, stock routes or access tracks.

Measure the topsoil in a number of places within the areas you established in Step 9 that have similar landscape features. In dissected landscapes (D), you should check the depth of the topsoil on the crests, upper slopes, lower slopes and drainage depressions. In level landscapes (L) you should check the topsoil depth every 100-150 metres (depending on the size of your property) or when there are subtle changes in the landscape. A gentle crest, slope or drainage line will need checking for different topsoil depth. The number of holes you dig will depend on the size of the area.

On Overlay 1 label the following codes using the blue marker:

- s - shallow topsoil (<10 cm)
- d - deep topsoil (>10 cm)

If there are obvious differences in topsoil depth within the same landscape area, mark the boundary of the change in topsoil depth using the red marker on the plan.



Figure 26 Step 10: Marking out the boundary between shallow topsoil and deep topsoil in each of the landscape areas on the plan. When in place, the overlay shows the landscape code (in black) and the depth of topsoil (in blue).