

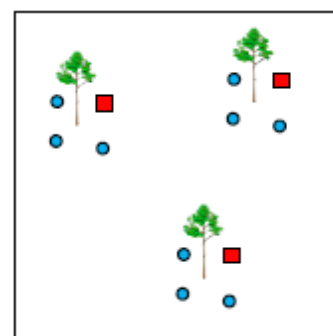
## Methods for collecting soil samples as established by the Forestry and Forest Products Research Institute

### [Survey methods]

#### (1) Collecting soil samples

- Collect soil samples at 4 points, separated by 2 meters in the north, east, south and west directions from each of 3 trees selected in each plot, prior to felling those trees (put a stake at the root of each tree after felling it).

Soil sample collection points

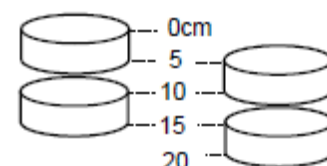


Trees to fell

- Litter + 4 cylinders
- Litter + 0-5 cm

- At 1 of the 4 points (marked with ■), excavate the ground to form a cross section of soil which is 50 cm wide and 30 cm deep and take photographs of the cross section (cross section of soil + deposited organic matter).
- Samples of deposited organic matter (litter) are collected using a square frame with a size of 25cm x 25cm. There are L, F and H layers on the surface. Take samples from each layer when a sufficient volume of sample can be collected. At this stage, the slope angle at the sample collection point should be measured using a clinometer. Number of samples: 1 (or 2 or 3) layer(s) x 3 collection points
- Take a soil sample using a cylinder 110 mm in diameter x 50 mm in height in the depth ranges of 0-5, 5-10, 10-15 and 25-20 cm and put the samples into plastic bags to take back to a laboratory for analysis. Soil particles attached to the cylinder or other tools used should be wiped-off with wet wipes every time to prevent cross-contamination. Each of these samples will be used to measure the radiation doses, volume weights and moisture contents. Number of samples: 4 layers x 3 collection points
- When the soil contains too much gravel that prevents collecting a sample in the cylindrical shape, collect fine soil as a rectangular block of soil of the approximate size, 20 cm wide x 5 cm long x 5cm high (the sample shape may be changed). Place this in a plastic bag marked as VB together with the width/length/thickness of the sample. Even when there is an extremely large amount of gravel, at least 200 mL of fine soil should be collected by extending the area for sampling.

■ Methods of collecting 4 cylindrical samples



- At the other 3 points (marked with ●), deposited organic matter is collected with a sample size of 25 cm x 25 cm and soil is collected in a depth range of 0-5 cm.
- Take soil samples in the depths range of 0-5 cm using a cylinder 110 mm in diameter x 50 mm in height to get samples with a constant area size. Put each sample into a bag to take back to a laboratory for measuring radiation doses.  
Number of samples: 1 (or 2 or 3) layer(s) x 3 directions x 3 collection points (Deposited organic matter)  
Number of samples: 1 layer x 3 directions x 3 collection points (Soil in the depth range of 0-5 cm)