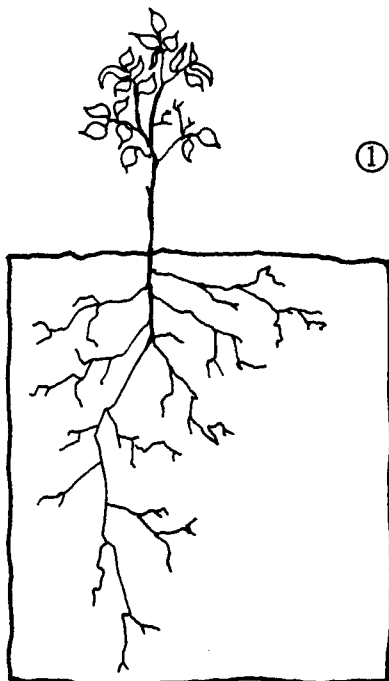


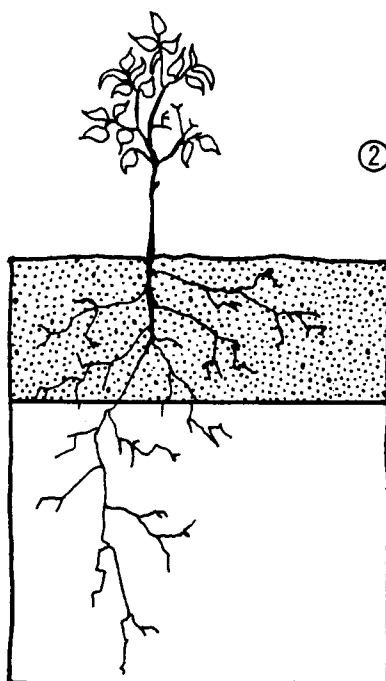


To use Soilmoisture Blocks, it is necessary to know how water is extracted from the soil and to know how water moves in the soil when an irrigation is applied.



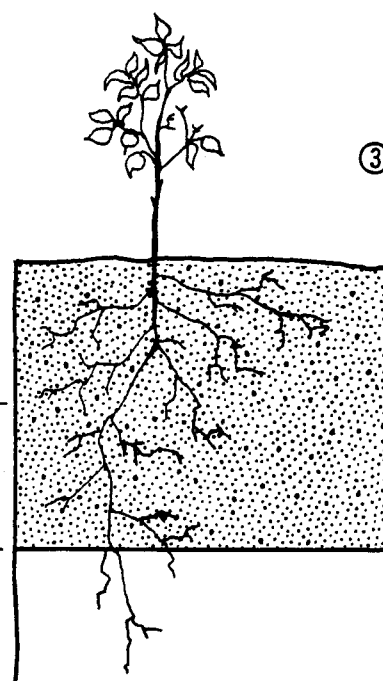
①

Roots have extracted moisture from soil. Irrigation is needed.



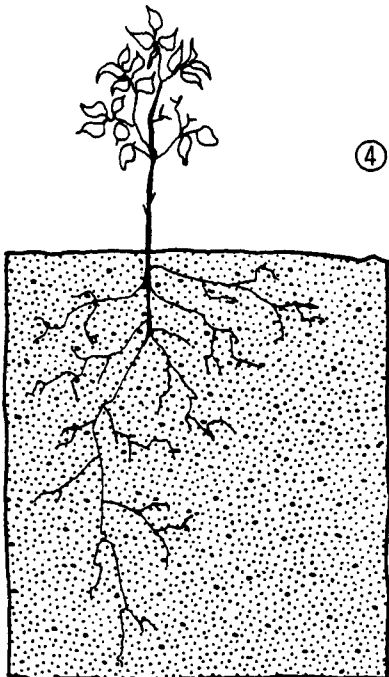
②

Water is being applied and ground is 100% wet down to the 1 ft. level.



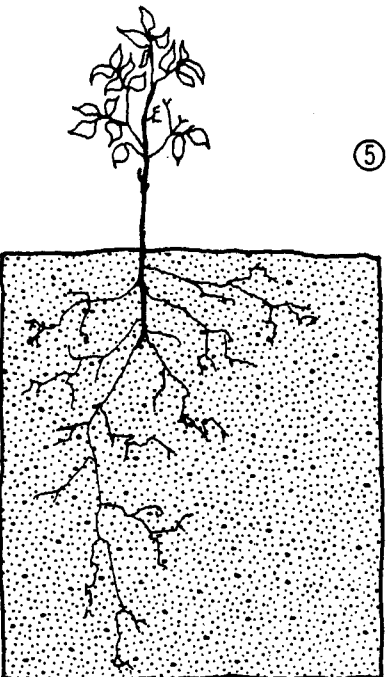
③

More water has been applied and ground is now 100% wet to the 2 ft. level.



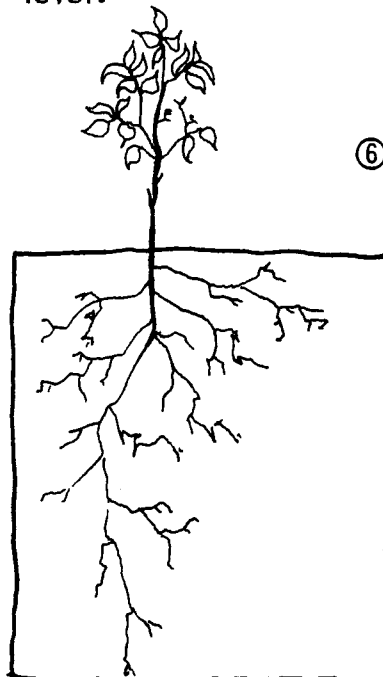
④

More water has been added and ground is now wet down to the 3 ft. level. Now, the ground has been restored with sufficient water to bring it up to 100% field capacity.



⑤

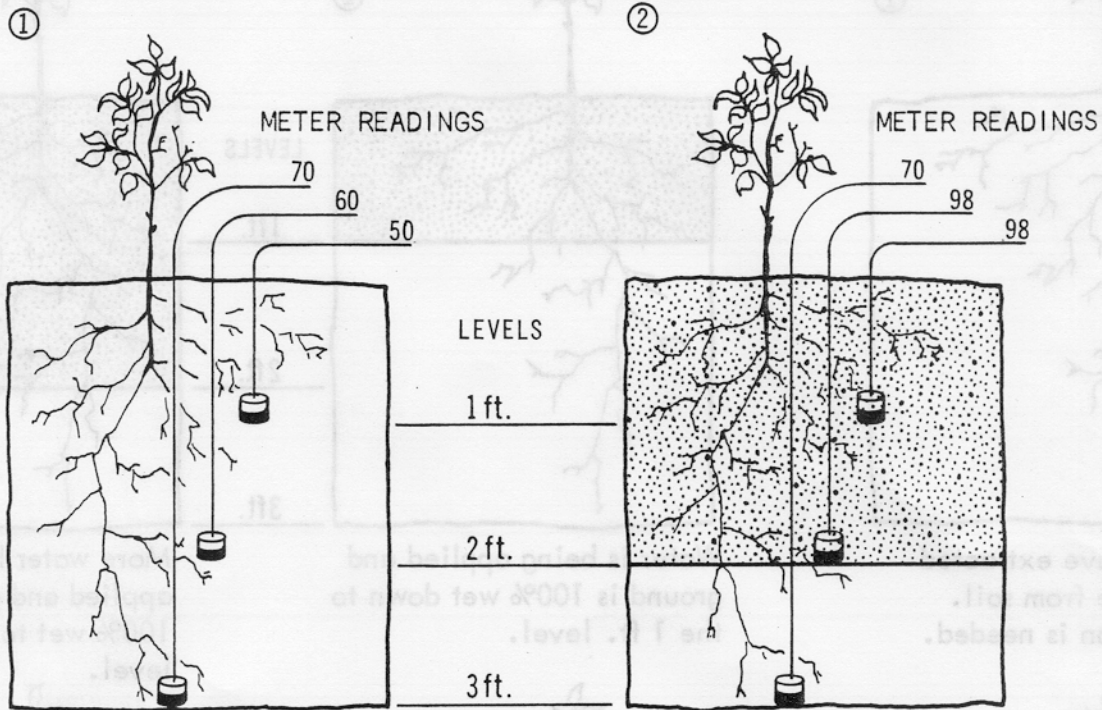
If more water is added, it will only run off or be lost to the underground. Each soil has a definite holding capacity. When it has been reached, you cannot add more water to the soil.



⑥

Again, the roots have removed water from the soil. Irrigation is needed.

Since we know that roots extract the moisture from the soil, and because soil is wet from the top down, we can use Soilmoisture Blocks to tell where the water penetrated.



Before Irrigation

Readings are taken for each block just prior to irrigation. These readings are recorded in book.

After Irrigation

Readings are taken two days after irrigation and are recorded in book. It is evident that the water penetrated to the 2' level because the 1' and the 2' blocks came up to saturation- or a reading of 95 to 100. Since the 3' block did not come up, we know the water did not penetrate to this depth.

IMPORTANT

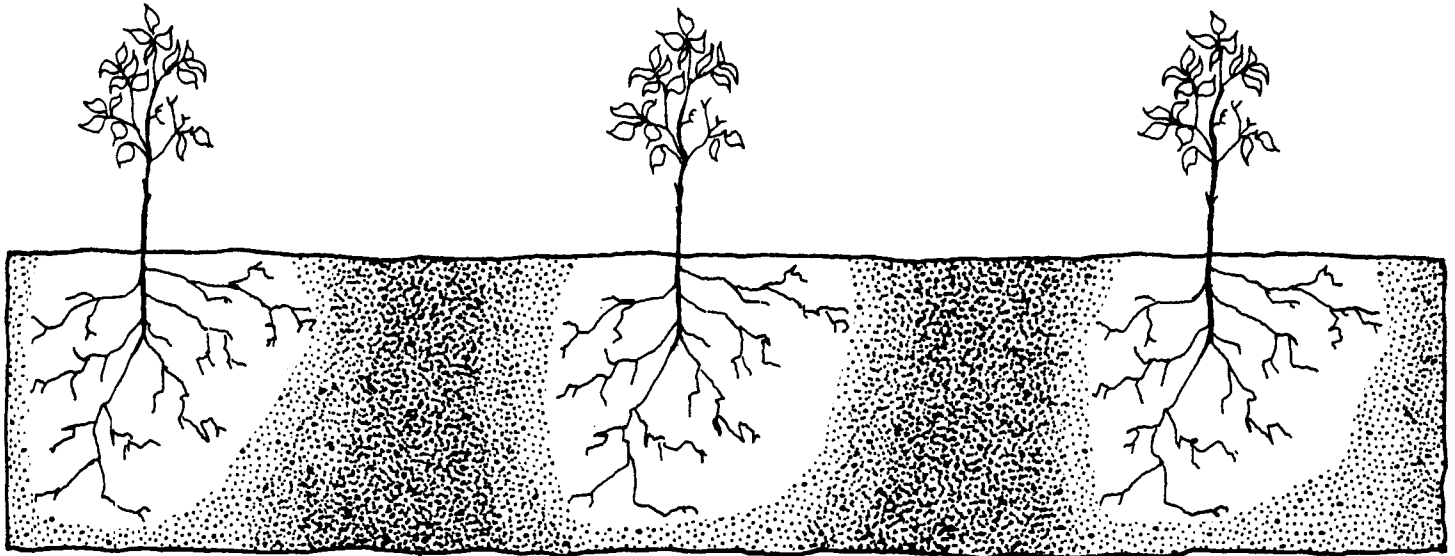
When installing blocks, it is important to place them in the root zone for that particular plant. But, it is very important to use enough blocks to get a good sample of the area to be irrigated.

Use a small auger to drill the holes so that the roots will not be destroyed around the moisture blocks.

VARIOUS CROPS

Various crops require a different depth of installation depending on the root depth. Some require blocks at the 18 inch level. Other crops require blocks to the 10' level.

Young plants have limited root growth and, in the early stages, they do not extend roots into all the soil area.



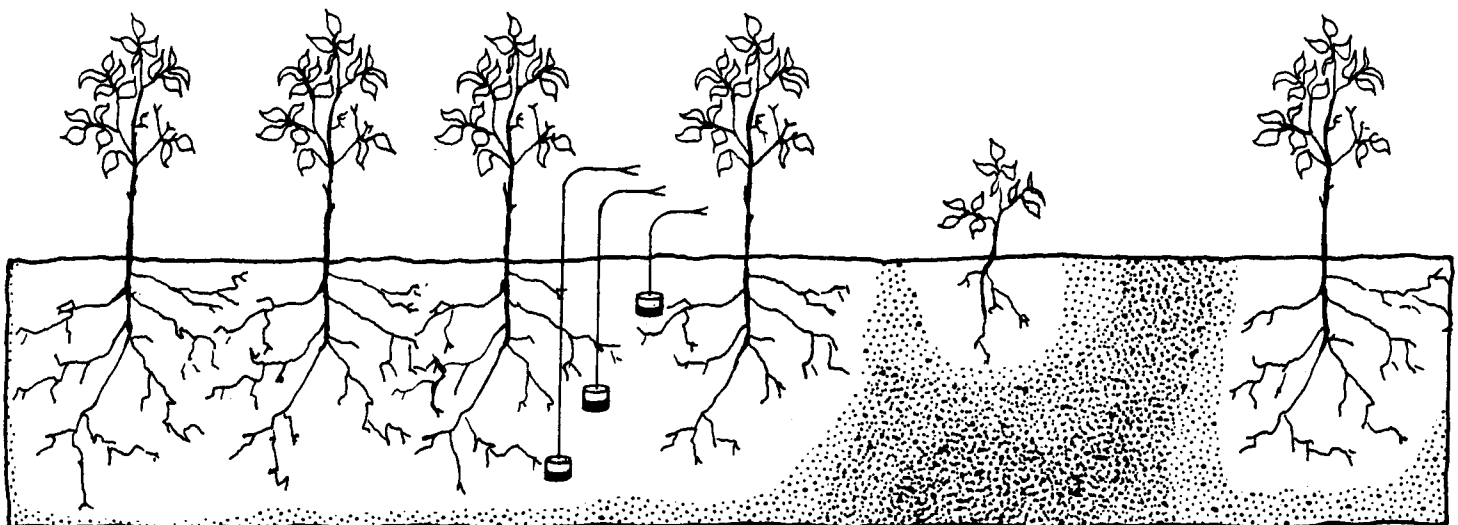
In the root area,  
the soil will be depleted  
of its moisture.

In the area between plants,  
the soil with no roots will retain its  
moisture.

For all practical purpose, it can be said that water will not be removed from the soil except by plant roots -- and some loss from surface evaporation.

We should endeavor to apply only enough water to put back the amount used by the plants, plus the amount needed to replace the loss from surface evaporation. If leaching is desired, then additional water can be applied.

IF YOU USE A SUFFICIENT NUMBER OF SOIL MOISTURE BLOCKS, YOU WILL KNOW WHERE THE WATER IS NEEDED.

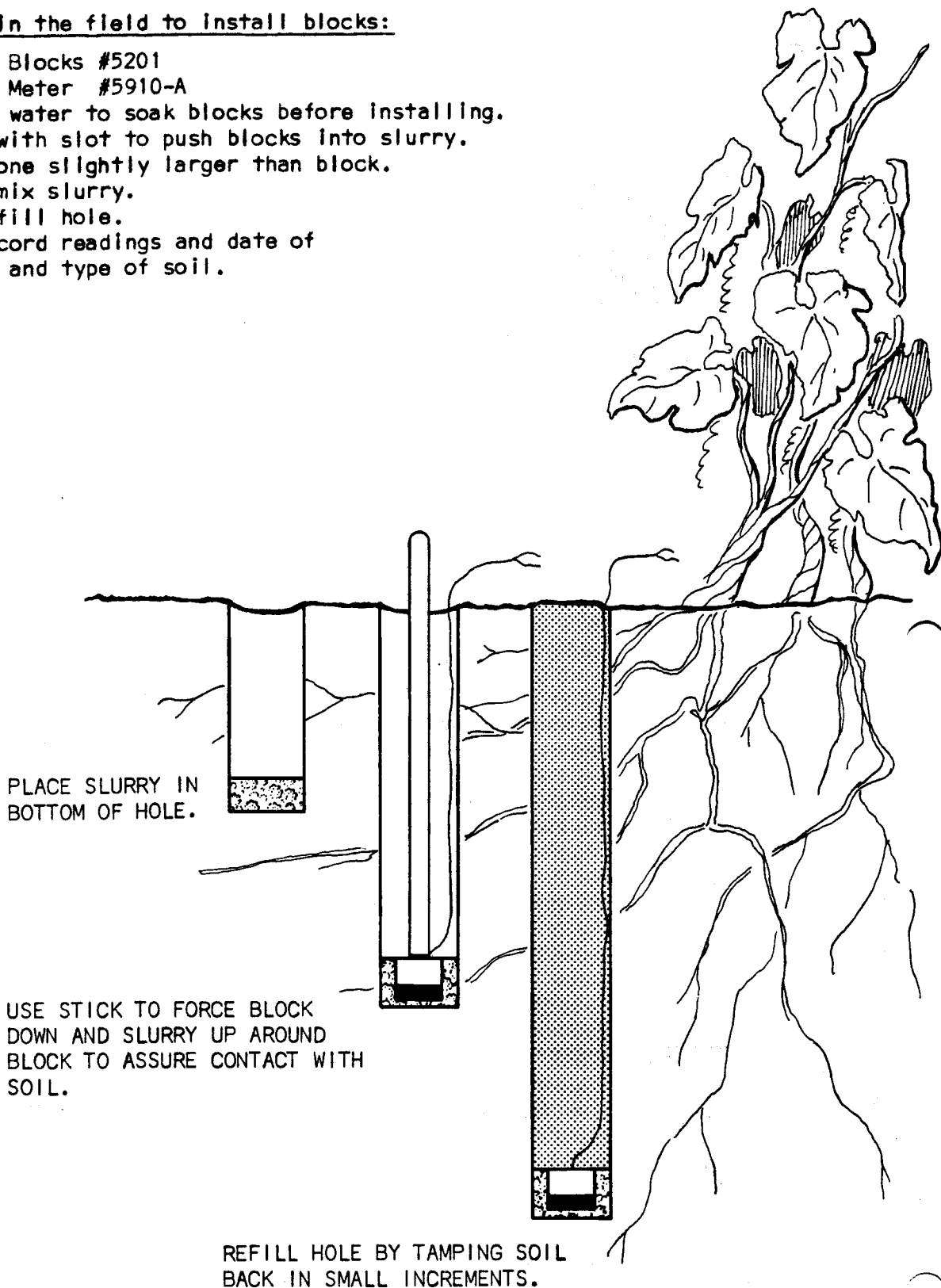


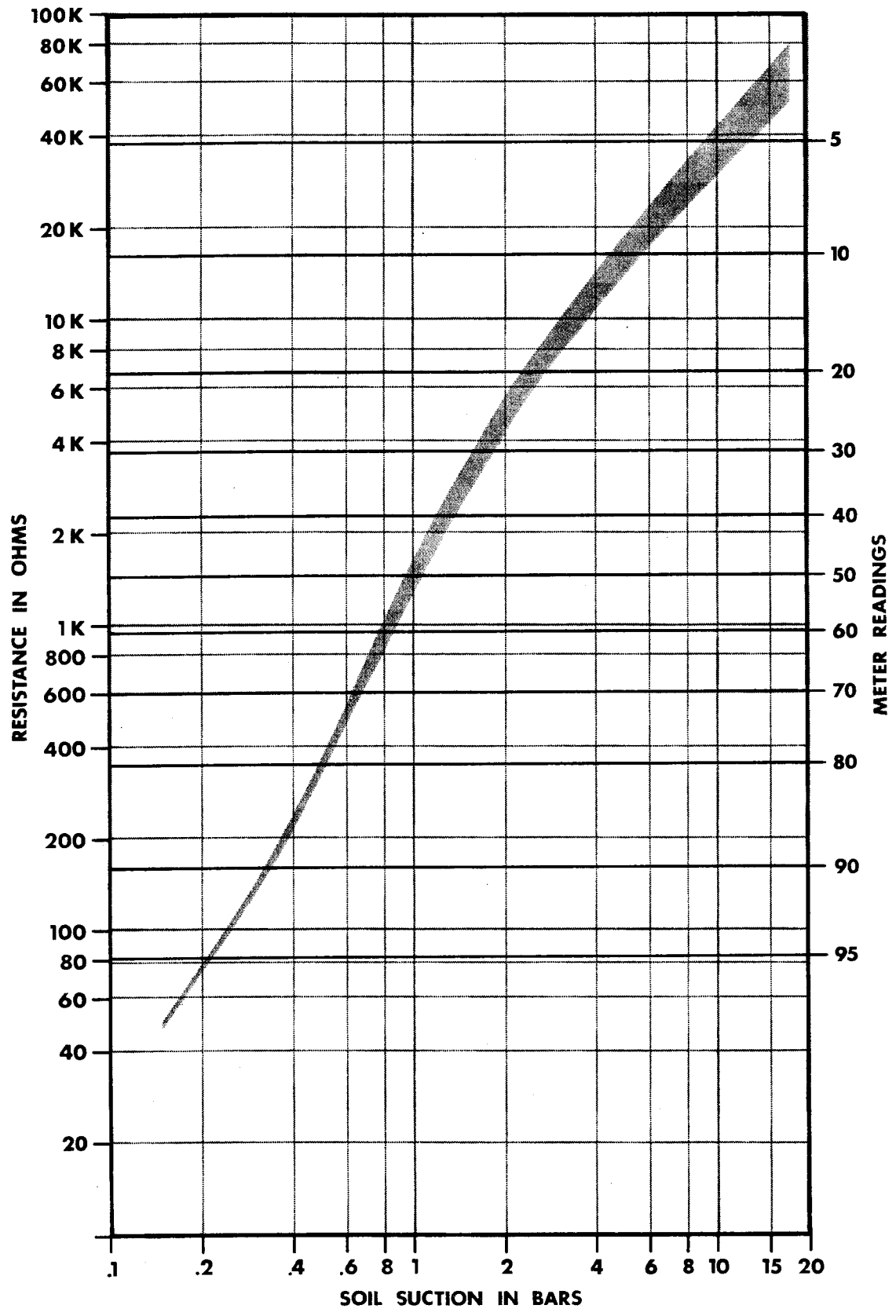
Install Blocks in the root zone of representative plants. Avoid placing blocks by dead plants or missing plants, or a replant in an older orchard. If blocks are placed by a replant, the information gained will apply only to that one small area around the replant.

THIS ILLUSTRATES ONE "STATION" OF 3 BLOCKS AT DIFFERENT LEVELS. KEEP THE HOLES ABOUT SIX INCHES APART.

Equipment needed in the field to install blocks:

1. Soilmoisture Blocks #5201
2. Soilmoisture Meter #5910-A
3. Container of water to soak blocks before installing.
4. Broom stick with slot to push blocks into slurry.
5. Auger - use one slightly larger than block.
6. Bucket - to mix slurry.
7. Shovel to refill hole.
8. Book - to record readings and date of installation and type of soil.





SOIL MOISTURE CONTENT - PERCENT OF DRY WEIGHT

