**The Clinometer to Measure Soil Slope Information Sheet**

The clinometer is a small, light weight but strong and easy to use instrument. The clinometer has a small hole used to read the soil slope in degrees scale (left side) and the equivalent in percent scale at the right side. It also has a calibrated and gyratory weight in the interior. Although the clinometer has many uses, such as measure the height of a tree or a building, its major use in agriculture is to measure the soil slope.

**How to measure soil slope?**

**Calibrate:**

The first step is to calibrate the clinometer at sight level (cero), or the horizontal sighting of the person using it. To calibrate it you can use a level rod or the level (0) of your vision height looking to another person. Level zero in the clinometer will be read wherever 0-0 hits the rod or the body of the other person. This initial calibration must be done in a complete leveled site and will be your reference point for the rest of your points. You must look through the clinometer lens keeping both eyes simultaneously open and find the 0-0 measure in the cylinder in the interior of the clinometer. Should you change partner, you must calibrate the clinometer again.

**Estimating Slope:**

1. Stand so you are facing directly up or down the slope.
2. Hold clinometer vertically. Keep both eyes open. Use on eye to read the scale inside the hole and the other eye to sight on an object that is about the same height above the ground as your eye level height. Align the horizontal band with this object.
3. Read the appropriate scale in percent or degrees as indicated by the horizontal band.

**To Lay out a contour line:**

1. Determine a starting point (site where a conservation practice such as a hillside ditch will be constructed or trees will be planted). Mark the starting point with flags or wood stakes.
2. At some 20 feet from the starting point, set aside the second leveled point at 0-0 moving to the direction where the practice will be established.
3. Continue walking to the next point setting 0-0 level at about every 20 feet. Repeat this process until the laying out is completed.

**To Lay out a soil slope:**

1. To lay out a soil slope, such as a 4 percent slope in a hillside ditch to drain water to a desired place, select and mark a starting point and walk about 20 feet following the direction were the water is to be drained, but, following the 4 percent indicated in the cylinder of the clinometer and the rod or partner used for calibration. Repeat this process until laying out all the conservation practice. Remember to use flagging or wooden stakes to mark the contour or the slope.
2. For slope percent you just need to read the percentage directly from the clinometer. The minus (-) symbol in the clinometer means down slope, and a plus (+) symbol mean upper slope.

**Some conservation measures in which a clinometer can be used are:**

* Hillside ditches
* Contour planting
* Tillage direction