How to Farm on the Contour
Locating Contour Lines

Anyone of average ability can learn to locate contour lines. Two people are needed—a levelman and a rodman—also the following equipment:

1. Carpenter’s level with mirror and sights or hand level (see below)
2. Stakes
3. Hand ax or hatchet

A level rod and target, or a staff and marker, are an advantage but are not absolutely necessary.

Start the first contour lines on an average slope, usually down from the top of the slope the width of a land in plowing. When only one contour line is needed, as on small fields or quite uniform slopes, the line may be located halfway down the slope. Set stake and start leveling from this point (Position 1). For a target select some prominent point on the rodman’s features that is the same height as the line of sight. (For more accurate work the level rod or staff is used.)

The rodman paces 50 to 100 feet across the slope to Position 2, staying approximately on the contour. The levelman, standing in his original position, directs the rodman up or down the slope until he is on the same level or contour as the levelman. The rodman sets a stake at Position 2 and the levelman moves to this second stake, the rodman moving 50 to 100 feet on across the slope. This procedure is repeated until the line crosses the field. Thus no sights are longer than 100 feet.

Carpenter’s level equipped with sights and mirror for locating contour lines. This type of equipment is usually mounted on a staff, as shown above.
Contour farming will save soil and increase crop yields on cultivated land that has reasonably uniform slopes of 2 percent or more. On some southern Illinois soils underlain with tight clay, even more gradual slopes may be benefited by contour farming.

After a line of stakes is set, one man walks along the line, moving the stakes to get rid of minor irregularities and making straight lines or long smooth curves. A plow or some other tillage implement should then be used to mark the lines more definitely. A shallow plow furrow will be visible much longer than stakes.

Several contour guidelines should usually be staked on a slope. If they prove to be almost parallel, only one may be needed, but in most cases several lines are required in order to keep all rows reasonably level. If only one contour guideline is used, or if the width between contours is too great for width of lands in plowing, lands of even width may be located on each side of the contour line by pacing or by using a tape, wire, or rope to measure an even distance above or below the original contour line.

Suggested plan for plowing a field, using three contour guidelines
Two methods of plowing out point-row areas (A—A) in diagrams at left below

Contour Plowing

After the contour guidelines have been located, the first operation is usually to plow the field on the contour. The best plan is to start back furrows on the contour lines and work around them until about half the area is plowed; then plow the lands between, leaving dead furrows (see diagram at left).

For two methods of plowing uneven or point-row areas, see the diagram above. Method 1 is used for the first contour plowing when a field is being planted to an intertillled crop (corn or soybeans). The chief advantage of this method is that it practically eliminates turning on plowed ground. Method 2 is used for the second plowing when the point rows are still visible. This will locate the dead furrows on the contour-line back furrows.

Take care to lift the plow in crossing grass waterways and not leave parallel open furrows adjacent to the waterways. In plowing meadow inexperienced operators should mark the edges of the waterways with a shallow scratch furrow far enough back to be erased in plowing and to form an irregular plowed edge.
A Point rows midway between lines. Entire field is in a cultivated crop.

B Point rows end at next line below. Entire field is in a cultivated crop.

C Point rows not farmed. Space taken by small grain or hay crop.

D "Key" line system, point rows only at corners. Field is in one crop.

Four methods of contour-planting. These methods are also well suited for use with terraces (except D) or contour buffer strips. The strips, consisting of a small grain and a legume seeding or a hay crop, should be at least 20 feet wide along each contour line.

**Planting on the Contour**

In preparing the seedbed and planting small grain and row crops, follow the same general plan as in plowing. If the field has been plowed before contouring was planned, then guidelines may be marked out for diskning, drilling, or planting. Plowing on the contour, however, gives best results in checking erosion.

Before contour planting is started, some consideration should be given to the way the crop is to be harvested, especially if the corn is to be picked with a picker or soybeans are to be combined. Most machine operators like to have the point rows planted as shown in A above so they can be harvested last. To start planting, follow each contour line, using two planter markers at once, one above and the other below the line. Then plant from each side, using these marks as guides.
Limitations to Contour Farming

Best results are obtained when contour farming is done before serious erosion has started; that is, on smooth, fertile slopes not badly cut with gullies.

Contouring does best on fields sloping uniformly in one or two directions. It is usually impractical on fields of irregular topography with great variations in slope. If gullies are to be checked, grass waterways must be established in all draws or drainage ways that tend to erode.

A system of sound soil treatment and crop rotation must go along with contour farming. Even then, terracing or strip cropping may be needed eventually for more effective protection.

Terraces and Strip Cropping

Better erosion control than is obtained by contouring can be got by terracing or contour strip cropping, the terraced land being contour-plowed and planted with the terrace ridges as a guide. Likewise in strip cropping, the strips of hay on the contour may serve as guidelines. Contour farming frequently serves as the first step toward the use of terraces or strip cropping.

This folder contains the basic information for farmers who desire to plant crops on the contour but can get little or no technical help to do it. . . . For more detailed information see Circular 513, "Save the Soil With Contour Farming and Terracing," and Mimeo AG962, "Grass or Gullies." If detailed instructions for assembling the level shown on page 2 are necessary, send for Mimeo AEng420.

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