

Why the Plow? What makes good plowing?

One of the oldest and most valuable tillage tools of agricultural history, the plow has transformed many millions (probably billions) of acres of land into a productive seedbed. Through the ages, good plowing has been the soils best friend by preparing a seedbed with a minimum of time and effort, helping to control weeds, assisting in the degradation of mulch into organic matter, increasing water retention, and reducing erosion. One of the oldest plows known exist (said to date from 2000 BC) is a testament to the timelessness of this tillage practice. When plowing, a farmer is a part of a fraternity that spans many continents and generations. Plowing contests are more than turning over soil, they are a celebration of tradition, of agriculture, and of friendships.

Skillful plowing provides many benefits for the soil: 1) Furrows that are turned over at the proper angle create a furrow comb (ridges and valleys) that makes an excellent seed bed. Clods and holes should be avoided as they allow seed to fall too deep or cause it to lay on top. A farmer should be able to broadcast seed over the plowed field and harrow it lightly to incorporate the seed at a uniform depth. Once the crop emerges, rows should be visible. 2) The furrow comb also helps to slow the wind at ground level. This reduces the amount of soil that blows away and helps to deposit snow in the depressions. On hilly land, contour plowing slows water runoff which reduces erosion and improves moisture absorption. 3) Weed control can be achieved with good plowing. Furrow slices that are properly cutoff, rolled over, and placed tightly against the next furrow bury growing weeds and weed seed deeply enough to help prevent weed growth and seed germination. An extra weed control measure may be taken by plowing a split and then placing the crown on top of that. The split shaves off all growing plants at ground level so they do not grow through the crown placed on top of them.

A good job of plowing also helps maintain a field that is easy to work with: 1) An opening crown that is level with or only slightly higher than the surrounding furrows is preferred to one that is too high as it is easier to maintain proper seed depth for good germination and is more comfortable to drive over for the farmer. 2) The closing furrow should be narrow and shallow while still maintaining furrow conformation and trash coverage. This will help insure the best possible seed placement at planting time and reduce the depression that runs through the field for years to come. 3) The plow should be placed into and taken out of the ground quickly and uniformly across the field so that the ins and outs may be cleaned up with only one pass of the plow. Anyone who has plowed an uneven headland knows how rough bouncing through furrows can be. 4) From year to year, opening furrows should be placed over last years dead furrow to “unplow” ridges and depressions. This requires planning and skill with a plow.

The plow itself is an excellent educator for those interested in agriculture. The same attention to the details of fine plowing would serve a farmer well in choosing chemical, seed and fertilizer programs, making equipment adjustments, and selecting farming practices. With today's small profit margins, this attention to detail may be the difference between making money or losing it.