



Benefits of Drainage

Eleven Benefits of Drainage: *(Information courtesy of The Ohio State University and the U.S.D.A)*

1. Better soil aeration results from good drainage. This permits deeper and more extensive root development and a more favorable environment for beneficial soil microorganisms and earthworms.
2. Better soil moisture conditions with good drainage permit more timely operation of tillage, planting, and harvesting equipment. There is less chance of destroying soil tilth due to working soil when it is too wet.
3. Longer growing seasons can be achieved with good drainage due to earlier possible planting dates. Planting delays normally result in 1 to 2 percent decrease in yield for each day of delay. Well-drained fields allow you to begin planting 7 to 15 days earlier, and allow you to complete fall tillage programs later in the year.
4. An increased supply of nitrogen can be obtained from the soil where water tables are lowered by a drainage system. This can reduce your nitrogen fertilizer application.
5. Soils warm more quickly in the spring when free water is removed by a drainage system. This reduces the likelihood of planting delays or seeds rotting before germination.
6. Certain toxic substances and disease organisms are removed from the soil due to better drainage and better aeration.
7. Soil erosion can be reduced on a well-drained soil by increasing its capacity to hold rainfall, resulting in less runoff.
8. Deeper root development enables plants to better withstand summer droughts. Roots usually penetrate to within 15 inches of the water table. High water tables in the spring due to poor drainage cause shallow root development and a smaller soil volume from which plants can obtain moisture and nutrients.
9. Valuable livestock water supplies can be obtained by draining hillside seeps and piping the water to stock water tanks.
10. Increased crop yields and improved crop quality result from favorable soil moisture conditions with good drainage. **Yield experiments from over 125 drainage experiments produced the following estimated increase in yield attributed to sub-surface drainage:**

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|---------------------------|--------------------------|
| Silage Corn ...24% | Mixed Grain...47% |
| Grain Corn...34% | Hay...51% |
| Soybeans...29% | Alfalfa...42% |
| Wheat...76% | Peas...62% |
| Barley...72% | Wheat...76% |
| Oats...53% | Beans...57% |
| Sugar Beets...28 | Sweet Corn...36% |

11. Farmers who grew corn on land without a drainage system reported a loss of 442,214,461 bushels from 1979 to 1996. That's a financial loss of \$1,381,307,159 - well over a billion dollars.