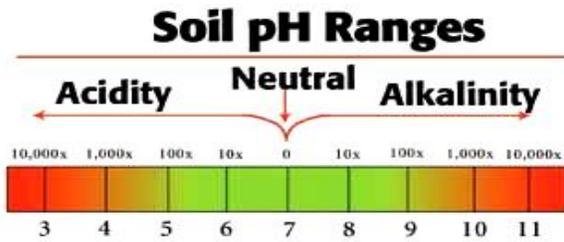
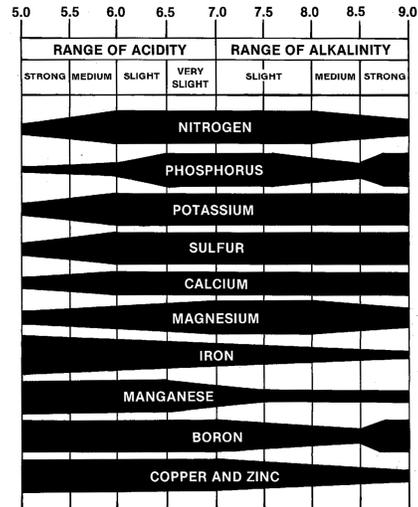


The importance of pH:



The soil pH scale is logarithmic; meaning that each whole number is a factor of 10. For instance, if a soil has a pH of 7.0 and this pH is lowered to a pH of 6.0, the acid content of that soil is multiplied by 10. If the pH is lowered yet further to a pH of 5.0, the acid content becomes 100 times greater than at a pH of 7.0. The logarithmic nature of the pH scale is evidence that small changes in a soil pH can have a large impact on nutrient availability and plant growth.

AVAILABILITY OF ELEMENTS TO PLANTS AT DIFFERENT pH LEVELS FOR MINERAL SOILS



Microbial Group	Wet wt. (lbs/ac)	Lbs/1000'sq ft.
Bacteria	300-3,000	12
Actinomycetes	300-3,000	17
Fungi	500-5,000	35
Protozoa	50-200	8
Algae	10-1,500	3

Microbial Biomass in typical fertile soils
Data from Nelson, 1997

Generally, soil microbes grow best in soils of near neutral pH (7.0) having adequate supplies of inorganic nutrients (N, P, & K), a balance of air and water filled pore space (about 50-60% of water holding capacity), and abundant organic substrates (carbon and energy sources). When any one of these parameters gets too far beyond the typical range some segment of the population will likely be stressed.