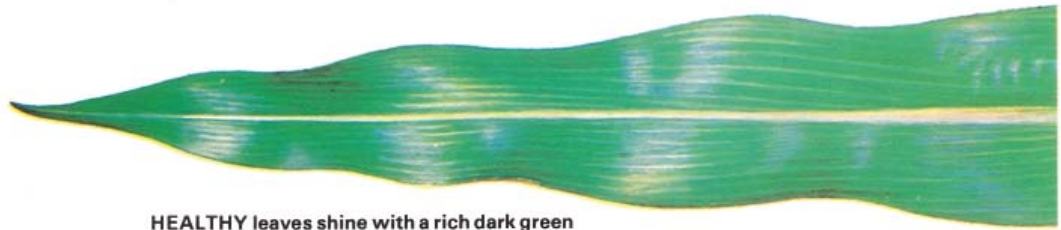


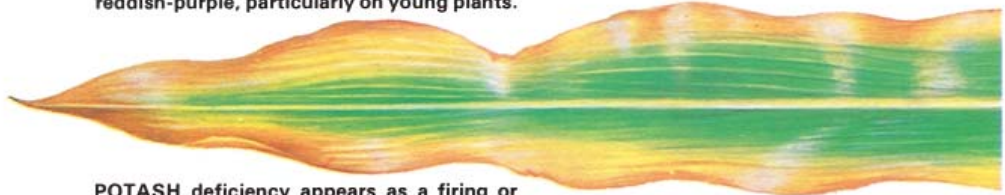
# Guide to Nutrient Deficiency Symptoms



**HEALTHY** leaves shine with a rich dark green color when adequately fed



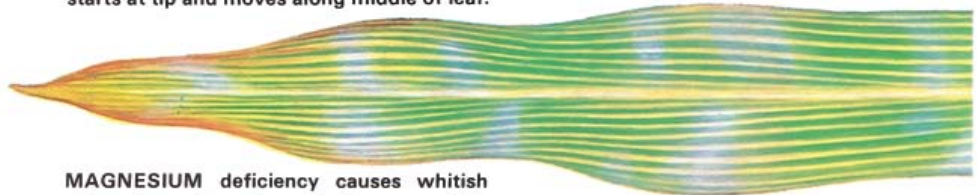
**PHOSPHATE** shortage marks leaves with reddish-purple, particularly on young plants.



**POTASH** deficiency appears as a firing or drying along the tips and edges of lowest leaves.



**NITROGEN** hunger sign is yellowing that starts at tip and moves along middle of leaf.

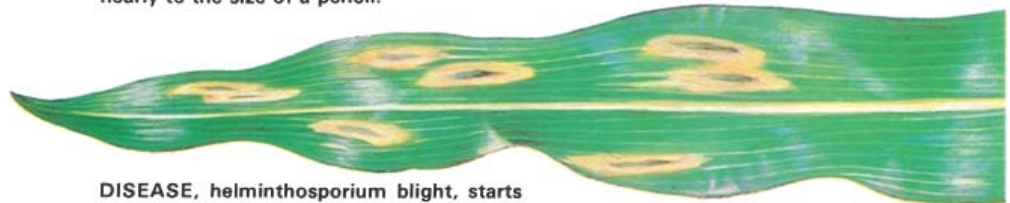


**MAGNESIUM** deficiency causes whitish strips along the veins and often a purplish color on the underside of the lower leaves.

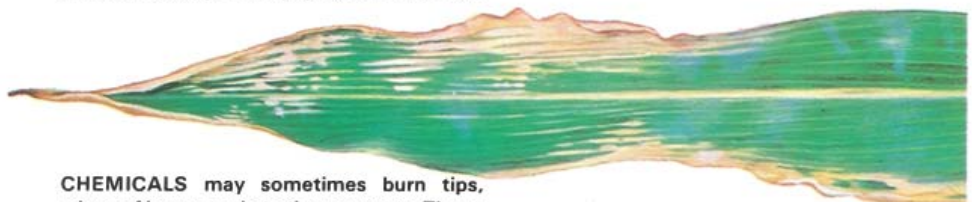


**DROUGHT** causes the corn to have a grayish-green color and the leaves roll up nearly to the size of a pencil.

Drawings: Maynard Reece



**DISEASE**, helminthosporium blight, starts in small spots, gradually spreads across leaf.



**CHEMICALS** may sometimes burn tips, edges of leaves and at other contacts. Tissue dies, leaf becomes whitecap.



**DEEP, SPREADING ROOTS** of healthy, high-yielding plant will crowd a half-bushel basket.



**PHOSPHATE** shortage during early weeks causes a shallow root system with little spread.

**ROOTWORMS** prune heavily as they eat small roots, tunnel in larger ones.



**POOR DRAINAGE** and hardpan are causes of a flat, shallow root system. Corn with poor roots can't stand drought and is easily blown over by high winds.

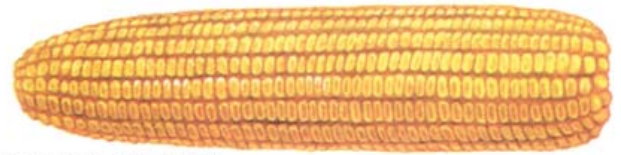


**ACID SOIL** is indicated when the lower part of the root is discolored and decayed, particularly when brace roots shoot from third or fourth node.



**PRUNED ROOTS** are work of a cultivator. Shovels were too deep and too close.

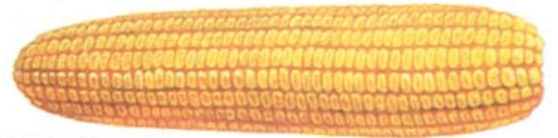
**CHEMICAL** damage makes roots writhe and twist. Joined brace roots are another symptom.



**NORMAL EAR** on well fertilized high-producing corn weighs about 2/3 lb. It has well filled tips.



**BIG EARS** weighing up to 1 lb. indicate that plant population was too small for most profitable yields.



**SMALL EARS** usually are a sign of low fertility. For better yields, boost fertilizer application.



**POTASH** shortage shows up in ears with poorly filled tips and loose chaffy kernels.



**PHOSPHATE** shortages interfere with pollination and kernel fill. Ears are small, often are twisted and with undeveloped kernels.



**NITROGEN** is essential throughout the growing season. If plant runs out of nitrogen at critical time, ears are small and protein content is low. Kernels at tip do not fill.



**GREEN SILKS** at maturity may be caused by too much nitrogen in relation to other elements.



**DRY WEATHER** slows silking behind tasseling; kernels aren't pollinated.