

gain a foot-hold, from time to time, on the farms of the most careful; but every farmer should become acquainted with the different kinds that are most noxious, and the best methods of eradication.

### Objections to Weeds

1. WEEDS ABSORB SOIL MOISTURE.—One of the essentials in the success of growing farm crops is the conservation of soil moisture in order that the growing plant may have a constant and sufficient supply. Without soil moisture there can be no growth. Every effort is made to supply the plant with the required amount of moisture. Nature supplies most by means of the refreshing rains; man sometimes supplies it direct by sprinkling, irrigation and other means; but the conservation of the water already in the soil, by proper cultivation, is the great problem for the farmer. Weeds absorb a large amount of this water, and it is evaporated from their leaves and thus lost to the soil. An average mustard plant pumps from the soil about fourteen ounces, or seven-tenths of a pint of water, per day; and a sunflower may absorb thirty-three ounces in one day. Plants of all kinds take up considerable amounts of water from the soil and transpire it into the air. The amount transpired is generally in proportion to the surface of the leaf, but thin leaves transpire more than thick ones. Where weeds are present they compete for the water supply of the soil and reduce the amount available for the crop. This accounts for the stunted character and reduced yield of crops over-run by them. The reduction of yield due to the presence of weeds may reach 50%. Many consider this waste of moisture the most serious injury done by weeds.

2. THEY USE PLANT FOOD.—Through their roots plants may take up a large quantity of food from the soil. Many weeds are very heavy feeders, as is shown by their rank and very rapid growth. Analyses of plants of different kinds show a high percentage of potash and phosphates, and sometimes of nitrogen.