

## THE USES OF BIRDS

The two greatest enemies of the agriculturist are insects and weeds. There is no part of a plant that the former will not attack. They burrow in the roots and sap the vitality of this food-absorbing organ; they pierce even the hardest, driest bark of a tree and fatten on the pulpy, succulent tissues beneath; the leaves are their favorite fare, while the seeds and fruit, with their abundant supply of concentrated food laid up for the use of the growing seedling, is as nutritious to baby insects as to baby plants. As a result, no matter whether the plant is raised for its root, stem, leaves, seeds or fruit, it is continually attacked by these greedy eaters. At the very smallest estimate, 10 per cent. of crops are destroyed by this source. Where a farmer now gets 10 bushels of grain or picks 10 barrels of fruit, if the insect pests could be banished he could increase this output by 1 bushel or 1 barrel, as the case may be.

Weeds are almost as harmful. The seeds that are carried in various ways to the land grow up with the crop, compete with it for food, and diminish materially the number and vigor of the plants.

Lime sulphur, Paris green, Bordeaux mixture will do much, but the farmer has an ally more potent far, than all of these combined, which he is altogether too slow to recognize—the birds. Through indiscriminate slaughter, unkind treatment, and disturbance of natural conditions they have been so greatly diminished that they are no longer able to keep the insects and weeds successfully in check. There is not a shadow of doubt that if our insectivorous birds were more numerous in species and individuals the vegetable crops would be greatly increased.

Few realize the great numbers of insects and grubs that are eaten by a single bird. A wren will feed its young several thousand times each day; a nestling robin will devour almost its own weight of insects each day; the number of eggs, larvae and adult insects that a chickadee will pick from bark and leaves, or a woodpecker will chisel out from under the bark, is beyond belief. The numbers of weed-seeds destroyed by sparrows and finches is pro-