

Improvement of Crops.

Major Hallett, of Bristol, at a late meeting of the Midland Farmer's Club, made some very interesting remarks upon the culture and improvement of wheat. The major has given a great deal of attention to this subject, and is the very best of authority. It has been demonstrated beyond a doubt that there is scarcely any limit to the improvement by a selection in plants as well as in animals, and farmers cannot be too particular in their choice of seed. Always select the best, no matter what the trouble is, the crop will pay.

Major Hallett says:—

"Close observation showed that in the cereals, as throughout nature, no two plants or grains are precisely alike in productive power, and hence that of any two or greater number of grains or plants, one is always superior to all the others, although that superiority can be discovered only by actual trial. The superiority may consist in various particular characteristics. The following were the chief points of his standard in order of their importance, but all have to be duly considered: 1, hardiness of constitution; 2, trueness of type; 3, quality of sample; 4, productiveness; 5, power of tillering; 6, stiffness and toughness; 7, earliness of ripening. The plan of selection which he pursued was as follows:—A grain produced a plant consisting of many ears. He planted the grains from these ears in such a manner that each ear occupied a row by itself, each of its grains occupying a hole in this row; and the holes being twelve inches apart every way. At harvest, after the most careful study and comparison of the plants from all these grains, he selected the finest one, which he accepted as a proof that its parent grain was the best of all, under the peculiar circumstances of that season. This process was repeated annually, starting every year with the proved best grain, although the verification of this superiority was not obtained until the following harvest.

"After giving instances of the results due to the influence of selection alone, by which the length of the ears had been doubled, their contents nearly trebled, and the tillering power of the seed increased five-fold. Major Hallett next proceeded to consider what might be effected by the combination of thin seeding with selection. Taking the seed wheat sown by a usual mode of two bushels per acre, one and a-half million of grain per acre (speaking roughly) were put into the ground. In ordinary crops the number of ears produced per acre being taken as about one million, and the crops as 34 bushels, they had 700,000 grains to the bushel, 23,800,000 grains per acre, or an average per ear of only 23 to 24 grains; and if more than one million ears per acre were claimed, it must be at the expense of their contents. Five pints of wheat per acre planted in September, 12 in. by 12 in., gave 1,001,880 ears per acre, or 67,760 ears in excess of those produced on the other side of the hedge from six pecks, or more than twenty-one times the seed. Again, five pints planted 12 in. by 12 in., October 17, gave 958,320 ears per acre; and planted similarly October 4, 966,792 per acre; while one bushel planted October 15, gave only 812,160. Two plants of 24 ears each gave 1,911, and 1,878 grains, or seventy-nine per ear. Twenty ears per foot, at 48 grains only to the ear, would produce eleven quarts per acre. In reference to effects of his system, Major Hallett directs attention to the effect upon the crop of the more increased size of the grain produced. A bushel of pedigree wheat produced from

single grains, planted 12 in. by 12 in., contained about 460,000 grains, while a bushel of ordinary wheat contained 700,000 grains and upwards. Therefore, in two crops, consisting of precisely the same number of grains, the crop from the thin seeding would be upwards of seventy bushels against forty-six bushels, or nine quarters against six quarters per acre."—*Farm Journal*.

RYE CULTURE.

The culture and production of rye is reported in all the States and Territories except Arizona, Dakota and Wyoming, in the last census returns. Statistics would indicate that the crop was one of no inconsiderable importance, and ought to receive greater encouragement and attention generally. Rye ranks next to wheat for bread, and is superior to low grades of wheat oftentimes

for and putting in of the crop than would warrant a fair crop of either corn or wheat. Very seldom is anything more done than mere plowing, and that not of the most careful kind, as preparatory for the seed; and after broadcasting, that it is harrowed over, allowing the harrow to "hit" the whole. If very nice work is made, the harrow is allowed to "lap" a little. But although rye will accommodate itself to a variety of circumstances, it well repays generous culture and fertilizing.

Plowing should be as thoroughly done as for any other crop. If the ground is a fallow, two good plowings will tell on the crop, if followed by sufficient harrowing to fine the surface for a good seed-bed. If the soil is poor and hungry, some good fertilizer should be applied; and here allow me to answer an inquiry some weeks old concerning a fertilizer for rye. If good stall or

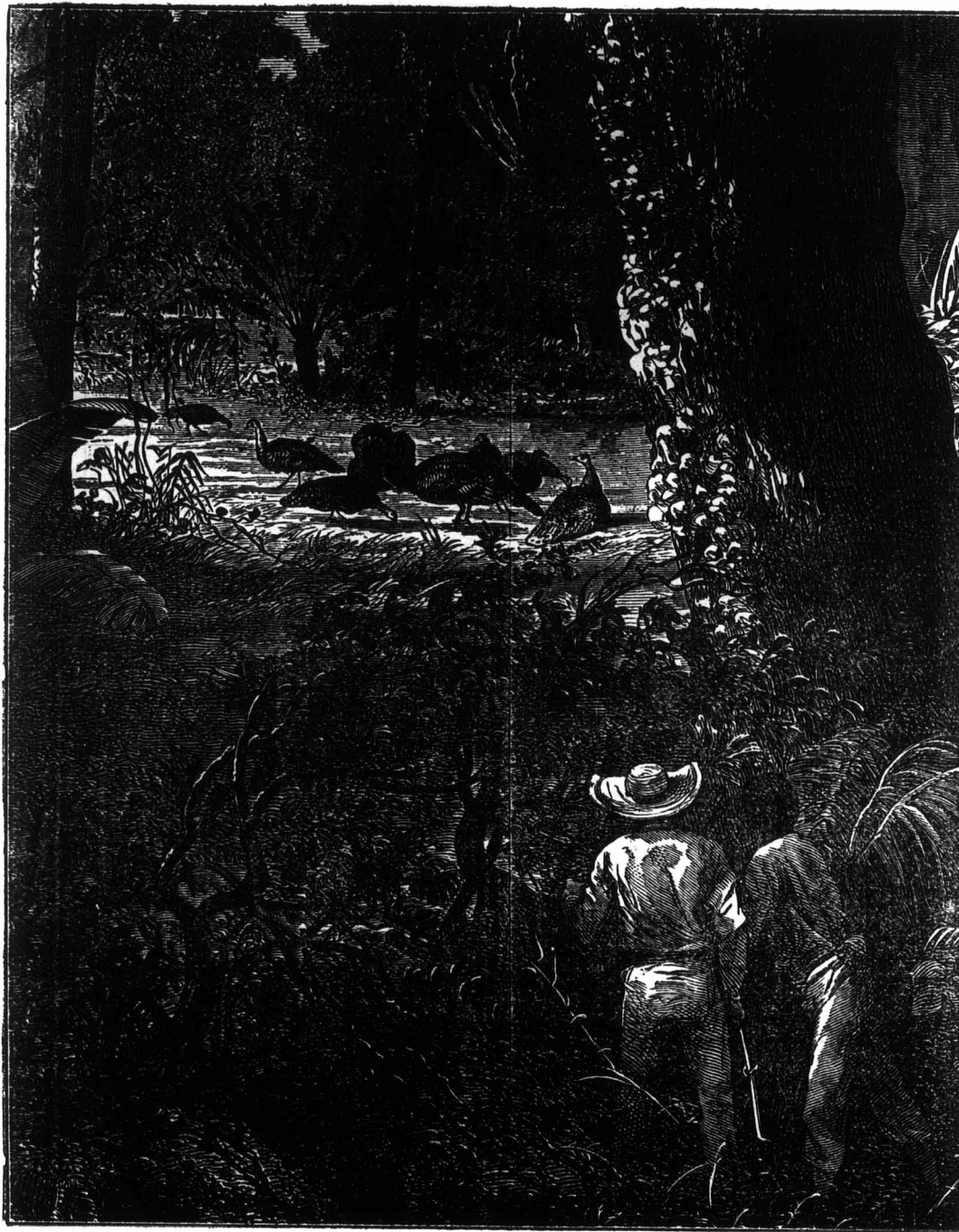
sonable prices, no one need feel afraid to use it after composting with earthy matter. If one has coarse litter or straw yard manure, which it is desirable to reduce in a short time, compost it three or four weeks with this fish refuse and muck or earth, and by one overhauling it will be pretty effectually broken down. An application of from one-half to one ton of fish scrap composted with muck, &c., makes sufficient manure for one acre. — *W. H. White, in Country Gent.*

Wild Turkeys.

The accompanying illustration represents a flock of wild turkeys in South America. With us, in this part of Canada, the wild turkey is now nearly exterminated. As the woods become thinner, and population increases, their chances of life are diminished. They must soon be only known to us in history as the things that were. We, like other green Englishmen, came here prepared with rifle, shot gun, bowie-knife, pistols, &c., &c., expecting to find lots of game. We carried our gun on our shoulder and dirk by our side when we left the steamboat at Hamilton thirty-four years ago. We walked to Ancaster, Brantford, Mt. Pleasant, Woodstock, Galt, Guelph, Blanchard, Gooderich, then to Col. Talbot's, in Elgin, and finally landed in Middlesex. Of course, boy like, we would shoot at any wild bird or animal we could see, and they were very few. We shot lots of woodpeckers of various kinds; they were then plentiful, and the only kind of bird that was. Now we cannot see one to twenty to be found then. We expected to have found rattlesnakes, large, venomous, charming and dangerous, but have never yet seen one.

AN ENGLISH PRIZE FARM.

Mr. Checkley's farm occupies about a square mile of land between the Ridgmount and Midlington stations, on the Bedford and Bletchley line, by which it is divided. It lies on the dark colored Oxford clay, here forming a ridge or escarpment, on the height of which the substantial and somewhat lofty farmhouse is situated, overlooking an admirable landscape. About two-fifths of the land are in permanent pasture. A good part of the arable land was broken out of this pasture 20 or more years ago. Its present tenant has, we understand, lived all his life upon the farm, and certainly its crops, and its herd and flock, the result of his management—for they are all home-bred—do great credit to his judgment and his skill. There are 2 sets of farm buildings—one of brick and wood and slate and thatch, including barn and stabling, and several yards, and large accommodation for cattle; the other, newer and more systematically planned, with yards and sheds and central double-stalled cow-house. There are here also some excellent cottages for the herdsman and the shepherd. A herd of 45 cows were being milked as we walked round the building, having come into their stalls for the purpose, and receiving at the time a meal of chaff and cake and bean and maize meal. They are a capital lot of large-framed, unpedigreed short-horn cows, exhibiting quality as well as size. They are kept for a butter dairy. We saw also an admirable lot of calves, a first-rate set of yearlings, and a still more admirable lot of (some 20 or 30) 2-year old heifers in the fields. Only the cow calves are kept, the others being sold early. A flock of long-



in quality, for bread and domestic use. Although not so generally used by families for the table as wheat, it would prove more economical and equally satisfactory if a portion of this were substituted in our everyday use for the common every-day bread.

A light grey soil, of sand or gravel, produces the best quality of rye—that making the whitest and best flour for bread, although we obtain a less number of bushels from an acre than from heavier, stronger soils. In my own experience I have obtained twenty to twenty-five bushels per acre on these light soils, where a previous crop was grown, and the soil suitably fertilized, and a light application of wood ashes or plaster was given in the spring after the ground was settled. So far as I have observed, less pains are taken in the prepara-

farm manure is wanting, a good substitute (and I do not know but equally as good as stable manure for the crop) is a good fish compost; for some soils it is equally as efficient as anything that can be had. Take fish scrap, pomace or guano, and compost it with loam, turf, sods or good seasoned muck, laying it up in alternate layers, using five or six parts of earth to one of fish, covering all in well with earth. Let it ferment till well heated through, then overhaul, and let lie till well warmed up again; when it can be applied broadcast and well harrowed into the surface before applying the seed. This will supply very much of the elements needed by the crop, and leave the ground, when the crop is off, in a better condition for future crops. Whenever fish or any of this refuse from oil factories may be had at rea-

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