

IV. A Rotation for Clay Soils.—Manures, &c.

1st Year.	2d Year.	3d Year.	4th Year.	5th Year.
Corn.	Oats, Rye, Clover, or Grasses.	Clover, Grasses.	Potatoes, Beets.	Wheat, Barley, Oats, Beans.

—Transactions of the American Agricultural Association.

Home Correspondence.

In answer to "C. D.'s" questions on the Guinea-fowl—The chicks of the white variety of guinea-fowl are white, not striped. As far as I have observed, the young of all gallinaceous birds, which are to be white when full grown, are white, or pale straw-colour (which passes for white), from the shell; but the converse of the proposition does not hold good. Like the infant offspring of man, many birds, apparently spotless in their early days, become stained and darkened as they advance to maturity. The pied sort is striped like the common one, and not to be distinguished from it for some time. The laced fowl I have only seen in its adult state: judging from experience in similar cases, I should say that this also would be striped, and scarcely distinguishable, if at all, in its younger stage of existence. Inquiry might be made of the country fowl dealers, who are more likely to have reared them than those in London; but, as Mr. Swainson justly complains, "they are not persons capable of writing" (or telling exactly what you want to know) "upon such matters, even had they the inclination to reveal what they no doubt consider the secrets of their craft." The laced guinea-fowl are quite deserving of a place amongst "Ornamental Poultry"; though the rarest variety, they are still to be had, and if "C. D." is interested in these points as a naturalist, the most satisfactory thing to his own mind will be to procure a pair and "try conclusions." The young chickens of the several varieties of poultry are certainly characterized by other differences than those of mere size. All are covered with down, but the colours of the down are diversely arranged in the various breeds. For instance, the speckled Dorkings have three brown stripes down the back, one darker and broader in the middle, and one on each side narrower and lighter. If "C. D." watches closely he will find that this down does not fall off, is not deciduous like the annual coating of feathers, but is gradually absorbed or changed into feathers, as the bird advances in growth; so that his term of second plumage can only be accurately applied after the first moulting. I hope shortly, in giving the biography of one of the water-fowl, to suggest some views of the subject which may be new to many of your readers, and which it would not be fair to myself to anticipate here.—D.

The Food Question.—Under this designation I have read the observations of your correspondents, Hewitt Davis, "Falcon," and John Willimott. The question is, indeed, a momentous one; and I therefore seek insertion of the following facts. There is, unhappily, every reason to believe that one-fifth of the Potato crop of Ireland is deficient this year. The extent of Potato land, as averaged by McCulloch, is 2,000,000 acres; therefore, as there has been only one-fifth the usual quantity of Potatoes planted, the number of acres uncultivated is 1,600,000. Now if Mr. Davis will consult the following authorities, viz. De Jounes, Körtes, Bous-singault, Wakefield, Low, Johnston, Kane, &c., he will find that the average produce of the Continent, England, and Ireland, will give 9 tons per statute acre. Therefore the deficiency this year in Ireland is about 14,400,000 tons! The following Tables, which are grounded on the average of the authorities named, will show the relative quantum of nutritive food and its component parts, contained in the vegetables named; which "Falcon" desires to see published:—

Quantum of Actual Nutritious Material usually derived from 1 acre of Land.

Wheat	1055 lbs.
Oats	1175 lbs.
Peas	1225 lbs.
Potatoes	4076 lbs.

Component Parts of Nutrition.

	Wheat.	Oats.	Peas.	Potatoes
Starch and Sugar	825 lbs	850 lbs	800 lbs	3427 lbs
Gluten, or protein compound	185 lbs	230 lbs	380 lbs	604 lbs
Oil	45 lbs	95 lbs	45 lbs	45 lbs
Total	1055 lbs	1175 lbs	1225 lbs	4076 lbs

It is proved by the foregoing that an acre of Potatoes contains of food for man nearly four times that which can be had for an acre of Wheat, consequently the loss as a crop is nearly four-fold; and taking the weight of the nutritive material of the Potato, as only one-fourth the gross weight (which is under the reality), the food deficient is equivalent to 3,600,000 tons of Wheat. These are facts which, I believe, cannot be controverted, and I leave your correspondents to draw their own conclusions, keeping in mind that Government returns have shown 4,200,000 persons have hitherto lived upon the Potato solely, and that, except an increase in the culture of Mangold Wurzel and Turnips (which, as general food, will not support human life), there is no increase of other culture. England having cultivated but about one-fourth its usual crop of Potatoes, its loss of food must be in the same ratio, except that the Potato land has been all brought into cultivation there, while it lies idle in Ireland.—Jasper W. Rogers, Nottingham-street, Dublin.

Thin Wheat Sowing.—A pint of Talavera Wheat contains about 8,850 grains of corn. An acre of land

requires 43,560 plants at a foot apart. Assuming that this is the best distance for Wheat plants to stand at, we come to this result: an acre of land requires about 5 pints of seed Wheat; therefore, the waste of seed corn by farmers is as follows:—He who sows per acre

3 pecks wastes	43 pints or 850 per cent.
4 " "	59 " 1200 "
5 " "	75 " 1500 "
6 " "	91 " 1800 "
7 " "	107 " 2250 "

—M. G. [Perhaps you will follow up this calculation.]

Thin Sowing.—I beg publicly to thank your correspondent "J. B., of Allesley, Coventry," for his unanswerable condemnation of the barbarous system of overseeding land with corn. The condemnation of thick sowing is so convincing even to the most prejudiced, that, emanating as it does from the renowned locality of Coventry, it will effect more towards rational and systematic cultivation of land, and scientific seeding of it, than anything else I have yet read. Mr. "J. B." says that he harvested 20 acres of Wheat grown after Clover, which was mown twice last season; and which 20 acres, he continues to inform us, he sowed with 10 pecks of seed per acre. Here, then, was a fair specimen of the old system of "thick sowing;" 10 pecks of seed per acre on 20 acres of land, or 200 pecks or 50 bushels of seed on only 20 acres of land. And what was the result? I will give it in Mr. "J. B.'s" own words, as he wrote them from near—very near Coventry (see p. 645). "The hue," he says, "became deeper until the crop came into ear, so that my neighbours," he innocently says in continuance, "remarked that it would mildew; and such was the case; the blight fully establishing itself when the ears were about half filled; and now, instead of having a good sample of Wheat for sale to the miller, it is of but very little more value than to feed poultry." These are Mr. "J. B.'s" own words, and his own description of his own and his neighbours' plan of cultivating land and growing corn; he sowed 10 pecks of seed per acre on 20 acres. His crop was not fit for sale to the miller, or, in other words, was not fit for man, nor hogs, nor dogs, and only fit for poultry. Of course Mr. "J. B." will never pursue the same ruinous and barbarous system again, as nothing could be more complete and condemnatory of it than his lucid letter is, and the account of his farming. Let us, then, turn to the system of the scientific cultivators; to that of Mr. Davis and Mr. Mechi, and a host more whom I could mention. In the first place they have no blight—no mildew; not a speck of either; and never will have or can have. This, then, must be an advantage, or it is so considered by the "rational seeders," a race of farmers whom Mr. "J. B." condemns as "enthusiastic;" but then we know that what he means to condemn, he in the highest possible manner, praises; like Balaam of old, instead of cursing his enemies, he blesses them altogether, yea, and they shall be blessed. Supreme wisdom being with them as their guide, for the good of mankind they must ultimately prevail. From the system of Mr. "J. B." then we turn to that of the scientific cultivators, the enthusiasts as Mr. "J. B." terms them. The first of these is Mr. Davis, who has no blight like "J. B." nor mildew, nor lodged corn, nor fallow; yet for his Wheat crops he does not drill one-third of the seed that "J. B." informs us he sowed. Mr. Davis farms of very poor land, I think, full 700 acres; that is, taking it altogether it is very poor land; and on so large a scale he is the thinnest seeder I know; yet how beautiful, how luxuriant, how prolific were all his crops! I saw them twice during last summer, and never in my life was I more delighted; indeed I could hardly tear myself from a scene which delighted me so much; every crop was perfect in its kind, not like poor "J. B.'s" which was only fit for poultry, and would not grind even for hogs. And next to Mr. Davis we will visit Mr. Mechi; and here again how convincingly does the Leadenhall-street agriculturist, as "J. B." calls him, confirm all that "J. B." has written! I remember Tiptree before Mr. Mechi purchased a farm there. It was the most barren, sterile, and wild wilderness of a place I ever saw, notorious for the low estimation in which it was held. But what is it now? From a cold, wet, miserable wilderness, avoided and despised and rejected by nearly all, it is now one of the most beautiful and prolific spots in the whole county of Essex, if not of the world. And how has this happy change been effected? by what magic has it been accomplished? By pursuing a plan diametrically opposite to that of "J. B.'s," of Allesley, Coventry. Mr. Mechi plants half his land every year with Wheat, and what he has threshed this year was upwards of 13 and 14 coombs an acre, and all on the thin seeding system, like Mr. Davis. From Mr. Mechi's predecessors growing Wheat on not one-fourth of the farm yearly, and that from nearly 3 bushels of seed, which produced not more than 6 coombs of crop per acre, Mr. Mechi himself, on the thin seeding system, has made half the same farm produce annually, free from blight or mildew, Wheat of the finest quality, and a quantity equal, if not superior, to anything in this or any other country. Well then may Mr. "J. B." give so sorry an account of thick sowing; and of course he is resolved never to practise it more. But again, as as to my own doings, I drill 2½ pecks of Wheat per acre, and I have nearly 13 coombs of fine Wheat per acre; and I drill 3½ pecks of Barley per acre, and I have 16 coombs of produce; and as for blight and mildew, if I could not farm without them I would not farm at all. But Mr. "J. B." seems to doubt my ability to teach others the system which I and others are practising ourselves; but why not teach them? If I undertook to teach what I did

not understand myself, "J. B." might complain, but I am only offering to instruct others in my own yearly practice, and, therefore, surely there is nothing wonderful in my being able to do this. I do not know that I could teach "J. B.," but if any number of shopkeepers will form themselves into a company, and meet me in any town in Essex within 20 miles of my own residence, I will teach them, and gratuitously too, how to grow Wheat entirely without mildew or blight; to seed their land as I do my own, and to have luxuriant crops every year of their lives. This year I had three acres of Wheat to one of Barley; my seed on an average of Wheat and Barley was not three pecks an acre, and yet my crops were full 14 coombs an acre, or an increase of 75-fold. This autumn the same land will be seeded by me again with only one peck of Wheat per acre, and though it will be the third time of Wheat in four years, I do not fear a prolific increase of fine and luxuriant Wheat, and fit for any miller in the world. In conclusion, I beg again to thank Mr. "J. B., near Coventry," for warning his neighbours and others against his absurd and ruinous system; and for the honour of agriculture I hope he will see the error of his ways, and henceforth pursue a more rational practice.—G. Wilkins, Wix, Manningtree.

Thin Sowing.—The following are the results of some experiments tried by myself:—October 29th, 1844, drilled one land, in the middle of an eight acre field, with Chidham Wheat, at the rate of 1 bushel per acre; the produce 32½ bushels per acre. The remainder of the field was drilled with 1 bush. 7 gals. (or 1 bush. 3 pecks), the produce 30½ bushels per acre; thus showing an increase of 2 bushels per acre from thin drilling, and a saving in seed of 3½ pecks; the soil a thin chalk once ploughed after Clover. October 30th, 1845, drilled half an acre with Morton's Red Straw White Wheat in the middle of an eight acre field with 1 bushel per acre—produce rather over 40 bushels per acre; the remainder of the field was drilled with 1½ bushels per acre; produce 40 bushels per acre; the soil a strong loam and gravel, once ploughed after Beans. The above experiments were conducted under my own eye; drilling, cutting, carting, threshing and dressing, and measuring; and are as far as can be fair experiments. I have tried other like experiments, of which I have not the exact results; but they are such as to induce me to use a much less quantity of seed; some of my best Wheat this year is from little more than a bushel per acre. I drill all my Wheat 10 inches wide; generally roll in the spring; always harrow, horse and hand-hoe. I have been led to adopt thin drilling from actual experiment. I formerly drilled near 3 bushels of Wheat per acre; and on the farm I now live the former tenant sowed from 3 to 4 bushels per acre. What he grew is well known to most people in this neighbourhood; poor, miserable crops. I drill all my crop Barley from 1½ to 2 bushels per acre; Oats less than 3 bushels; Beans and Peas less than 2 bushels. The best piece of Beans I have grown was from rather more than 1½ bushels per acre. Let no one think of drilling his corn thin unless he intends to horse and hand-hoe, and keep his corn quite free from weeds, or he may rest assured a failure will be the result. I believe thin drilling owes its success to clean hoeing more than any other thing. I have no doubt that much less seed is required under Mr. Davis's system, i.e. Wheat after Beans and Peas well hoed. I have observed that fallow Bean and Pea stubbles, where they have been kept clean, require much less seed than lea ground, i.e. Grass land once ploughed, in which we frequently lose plant. For hoeing and cleaning crop I know of no better implement than Messrs. Garrett's horse-hoe of Saxmundham, Suffolk; all sorts of corn and roots can be hoed well with this hoe, drilled 9 inches wide and upwards. I have used it with the best results for destroying weeds four or five years. I believe thin seeding will answer best in wet summers, of which I suppose we have a majority, although we have had three dry summers out of four, namely 1844, 46 and 47 dry; 1845 wet. I believe these are exceptions, not the rule.—James Eames, Chawton, Alton, Hants.

Societies.

AGRICULTURAL IMPROVEMENT SOCIETY OF IRELAND.

Sept. 30.—The Council met this day to consider the proposition of his Excellency the Earl of Clarendon, contained in the following letter to his Grace the Duke of Leinster:—

"PHENIX-PARK, 23d Sept. 1847.
"MY LORD DUKE,—feeling the deepest anxiety for the objects of the Royal Agricultural Improvement Society, in which I have been honoured with the office of vice-patron, and knowing the interest taken by your Grace in all measures for practically ameliorating the condition of Ireland, as well as the zeal with which you have laboured in promoting agricultural knowledge, I am induced to suggest for your consideration an arrangement, by which I believe very considerable good may be effected, and valuable assistance given to the farming classes at the present time. I think it most useful to address your Grace in your capacity of President of the Royal Agricultural Society, as I believe it is through the numerous branches of that most useful institution that the agricultural classes can best be reached, and as I consider the means of bettering the condition of the Irish people must, for a long time, at least, be looked for in the improvement of the processes adopted in the cultivation of the soil. Between the termination of the harvest works of the present season, and the commencement of the operations for the ensuing spring, there will intervene a period which, although in a proper course of husbandry fully occupied by its peculiar and important labours, may be considered, as agriculture is carried on, at least in the remote parts of Ireland, to be of comparative inactivity, and I believe that advantage might be taken of the leisure which the farming classes will then have, to supply them, to a certain extent, with sound, practical instruction as to the great and well established