

### RAISING ROOT CROPS.

FROM careful tests and observations in the culture of roots. I find the most practical and simple method is to select the ground, manure it heavily, if sod (which is always preferable, in the fall before sowing the seed.) The following spring, as soon as the ground is dry and warm, plow as deep as you can, turning grass and sod under, or leaving the furrows on edge if the grass is all covered. Apply at least 50 bushels of wood ashes to the acre, harrow; then apply hen manure, if possible, at the rate of 40 or 50 bushels to the acre, and harrow until perfectly mellow and in prime condition for seed. Sow in drills 28 inches apart, with any good seed drill (Matthews' is good). When the plants have come up and made two leaves, hoe carefully, stirring the soil close to the plants. Then sprinkle land plaster upon each plant and leave for a week or ten days, when the cultivator can be called into requisition with good results. From this time on use the cultivator every week thoroughly, and the hoe and all back-aching work will be dispensed with. When the plants are about half an inch through, thin to the proper distance, three to six or eight inches.<sup>2</sup> If you are troubled with extreme wet or drought, hitch a pair of good horses, tandem-fashion, to a plow and run between the rows and you will be more than surprised at the result. Thorough tillage with roots is as essential as with any other crop. If once stunted or checked in growth, it is hard to induce rapid and healthy development afterwards. I am convinced that no stock raiser or dairyman can afford to do without this all important crop. Half a bushel of roots, cut fine with a Clark's root-cutter, with a little grain, will greatly reduce the amount of hay required, and bring the stock through to grass in a more healthy and thrifty condition, which is very essential to the dairyman. Let more roots be raised and farmers will have more hay to place upon the market.

Fluvanna, N. Y.

R. Y. N.

### SOILING PROBLEMS.

We have never tried soiling to any extent, as we have a large amount of land fitted only for pasture. A good rotation for soiling would be, winter rye to begin with in April; then oats, or spring rye: clover (red), Hungarian Grass and corn; Sown at proper intervals, these would give almost or quite a constant supply of green forage here. We grow from 15 to 18 tons of fodder corn per acre—this is *actual* weight, not a guess or an estimate made from the produce of a measured rod. We have never been able to reach the 30, 40 or 50 tons per acre that are sometimes reported. It may be sown from June 1 to July 1. We usually sow about June 15. We still believe in silage as a most valuable addition to our cattle foods.

S. Johnson.

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I am one of those who think that lectures are a great means of advancing knowledge for the human race. As regards the improvement of agriculture, it may be observed that there are no people so dense as agriculturists, and so adverse to adopting any new thing. Now, there are men, a few only, who have studied agriculture very profoundly. I do not think that they could make a better use of their knowledge and their time, than by going about the country, and giving agricultural lectures.

(1) A good many queer ways in the States, but the idea of sowing roots *preferably* on sod is the queerest of all. A. R. J. F.

(2) What a droll sort of crops turnips or mangels would be if singled to three inches! I cannot think any one would use two good horses tandem fashion to horse-hoe roots! And to grow roots, in order to have hay to sell, would hardly be wise. A. R. J. F.

There is not one person in a thousand who understands the principles of drainage, and how the capillary system acts in drainage. (1) The agricultural lecturer would at first have to lecture to a small and most sceptical audience. But the good seed would have been sown; and some amongst his audience would have received ideas which they could not easily get rid of, and which they would gradually test by practical experience. ARTHUR HELPS: Author of Friends in Council.

### AMERICAN MERINOES

Probably three-fourths of the now fifty millions of sheep in the United States have a certain proportion of Merino blood in their veins. For eighty years the importations of Spanish Merinoes made between 1800 and 1812, have had especial interest for American breeders, who found in the improvement of fleece and carcass opportunity for displaying their highest skill in breeding and management. Their success in these respects has been such that the typical American Merino—(properly called American, because it is as distinct from the type of its Spanish progenitor, and as fixed in its characteristics, as the French, or Saxony or Australian types)—possesses every needed requisite for a profitable flocking sheep. Where so many eminent breeders have achieved success, when so many localities are justly noted for the excellence of their flocks, the day has gone by for any man or any State to consistently claim pre-eminence in the superiority of its flock. Money and enterprise has scattered flocks from the Eastern States, where the importations of four-score years ago were cradled, brought into general prominence, until today animals of the highest individual excellence are to be found West and South, as well as East.

The animals represented in this number of THE GAZETTE are from the well-known flock of C. M. Clark, of Whitewater, Wis., a locality not without reputation for the skill of its breeders and the excellence of its Merinoes. The three-year-old ram, Stub, took first premium at the Wisconsin Shearing of 1883, bred by C. M. Clark; sire, Captain Moore, bred by F. & L. Moore, Shoreham, Vt. First fleece was 10 lbs. 8 oz.; second, 20 lbs. 8 oz.; third, 30 lbs. 3 oz.; (2) weight of carcass, 95½ lbs. He has always been sheared in public at the Wisconsin State shearing. The central ewe of the group is a sister to the ram; is two years old; first fleece, 14 lbs. 8 oz.; second, 19 lbs. 7 oz.—both shearings public. The ewe at the right is seven years old (out represents her at four). The ewe and her sire were both bred by Mr. Clark. Her five last fleeces, three of them shorn in public, were 17 lbs. 3 oz., 18 lbs. 4 oz., 17 lbs. 8 oz., 16 lbs. 12 oz., and 18 lbs. She has raised three lambs and now has the fourth. Mr. Clark's flock was commenced by his father, John M. Clark, in the year 1857, by the purchase of about sixty ewes of Eben Porter, then of Orwell, Vermont, who was considered one of the reliable breeders of his day. The flock, in the words of Mr. Clark, "has been bred with a view to producing large, heavy fleeces of wool (grease a secondary consideration), and now numbers about 200, all recorded in the Vermont and Wisconsin Merino Sheep Registers."

(1) I presume the writer intends us to understand that the land is kept moist in drought by the water in the drains being raised to the surface by capillary attraction. A very old idea but one I take the liberty of disputing, unless in the case of spring-drains. A. R. J. F.

(2) Unwashed wool of course. A. R. J. F.

### NON-OFFICIAL PART.

The "Dairy World" of Chicago, Ill., offers \$20.00 for the best article on cheese-factory management, and \$10.00 for the second best our cheese-makers should all compete for these prizes.