

isement. Surely Normandy and the centrifuge together are not so easily beaten! (1)

Mutton.—The following paragraph has a hopeful look about it. But I trust the American breeders of mutton sheep will not forget that to rear good stock the land must be properly treated on which they are to feed:

"A new start has been taken in sheep-raising in Eastern Massachusetts in the last year or two, and there is no reason why this old-time, profitable branch of husbandry should not be revived again to the mutual advantage of shepherds and the mutton-loving public. Whereas the breed commonly employed was Merino or Merino grades and wool was the main crop desired, the aim to-day is lamb and mutton. The renewed interest manifested in sheep-raising seems to have emanated from the demand for these meats by the thousands of summer visitors, so to day, Oxford, Hampshire or Shropshire sheep are the favorites. Their lambs are large and plump and make quick growth, forming juicy, tender meat, which brings a good price. Carcasses of 50 to 60 lbs. live weight are easily produced at 10 to 12 weeks, making the lambs bring \$6 to \$10 each. By proper care and extra feed, all the time the sheep are under treatment, the breeding ewes may be turned off at a good figure for mutton. The industry must be conducted with energy and good calculation, and if these precautions be observed success is warranted."

Ridge culture of potatoes.—I wonder what crops follow potatoes in the state of Tennessee? A farmer from that country writes as follows to the "Country Gentleman":

Eds. Country Gentleman.—Noticing the trench mode of planting Irish potatoes, of your correspondent, C. A. B., I beg leave to give you my mode in contrast. I break my land well in the fall and let it rest until the first open spell in January and February. Then I harrow it well, have my seed out, and plant with potato planter in rows 32 inches wide, dropping the seed from 10 to 12 inches apart. No fertilizer is used. I let the field alone until the shoots begin to show themselves above ground; then take a single-horse plow and cover them back, throwing on two furrows, and let them rest until they begin to show themselves again. I then treat them as at first, covering them back the second-time, and leaving them untouched by cultivator, weeds or no weeds—the more the better; the weeds shade and protect the tubers from the hot sun.

No manure used, and as many weeds as possible encouraged to grow! Truly Tennessee must be a hot country to want weeds to shelter its crops from the sun, or else, the Irish potato is not a plant adapted to its conditions. And about the remaining crops of the rotation! Do they enjoy the fresh growth of weeds from the seeds of those grown in the potato-land?

Black-Tartar oats.—A correspondent of the English Agricultural Gazette writes to that paper to know if Black-Tartar oats impoverish the land more than other oats. The answer is simple enough: it is not what crops draw from the land that impoverishes a farm, but what is sold off it. Black-Tartars, as my experience teaches me, produce the heaviest crop of grain of any sown in this country, and therefore draw the land more. But if they are consumed at home, or if manure, or cake, is brought back from the town in which they are sold to replace them, the farm cannot possibly be any the worse for having grown them.

(1) **Answer.**—The butter made from cream raised in the Cooley creamer has certainly taken the prize at Paris this year. But "the best butter made" and "the best apparatus to skim the cream" are two very different subjects to submit to a jury. ED. A. BARNARD.

Garden-work.—I hope all my readers have taken advantage of the fine weather we have had lately to dig, or plough, their gardens and got them ready for the early spring-seeding. As a rule, if the land is dry enough, pease should be planted as early as possible, and where a difficulty exists in getting sticks for them, except at an exorbitant price, as in our towns, I cannot find any pea equal to Bliss's American Wonder. Sown on the 25th of April, it has, with me at least, always produced a picking by the 20th June, and with it I generally manage to get four crops off the same piece of land—as thus:

I sow the pease, very thickly, in rows 18 inches apart, and between the rows I plant a double row of small onions, saved from the previous year which are grown in this way: taking a piece of very rich land I sow onion-seed—large whites by preference—at the rate of 20 or 25 seeds to the lineal inch; they come up and ripen very quickly, so that by the middle of August they are ready to pull and store away in a dry place, each onion being, on average, about as large as the top of one's middle finger.

These are, as I said before, set in double rows, 4 x 4 inches apart, between the pease, and in a month you can begin to pull them, and very good and delicately flavoured they are.

When the pease are all gathered, say, about the first week of July, I have celery plants, that have been transplanted once, ready to take their place. These I trim—both tops and roots—and they never require shading, as they come out of the ground with a good bunch of soil adhering to the roots, and start again at once. I make the trenches about 14 inches deep and 4 feet apart, as I still stick to the old plan of earthing celery well up. In making the trenches, I throw the top spit on one side and the subsoil on the other, and with a strong 4-tined fork I break up the bottom, so that when the plants are set, they find a deep bed of moved soil under them—generally, about 20 inches—. Very rotten dung is dug in, on the top of which is returned the earth of the top spit I kept on one side, and the celery is set out about 8 inches apart in a single row. I don't like double rows: they are difficult to earth up. If your garden is near your house, and you have a hose from the tap, as you ought to have, just water every evening copiously—you can hardly overdo pease, when the pods are formed, or celery.

The land between the trenches should be kept thoroughly pulverised, and either lettuce or endive—transplanted once beforehand—be set in double rows—12 x 12 inches—. These will be fit for consumption before their site is needed for earthing up the celery. This is a simple job; only take care no earth gets into the hearts of the plants.

Thus we have, as I said before, four crops on the same piece of land, in the same season: pease, onions, salad, and celery, and the land being stirred continually by the hoe and fork, will, at the end of the autumn, be in first-rate condition for the crops of the following year.

Rothamsted experiments.—My readers may remember that, in the September number of the Journal 1887, p. 130, and the January number 1888, p. 6, I laid before them a condensed report of Sir John Lawes experiments on the growth of wheat and turnips on the same soil in consecutive years. By these experiments he convinced the agricultural world that the ash theory of Liebig was erroneous in application, and that to produce wheat without an abundant supply of nitrogen, or turnips without an abundant dose of phosphoric acid, was a hopeless undertaking. I have lately received the annual record of the work at the same station for 1888, and some of the results are worth referring to, particularly those that show the yield of crops grown con-