

**ENGLISH CROPS**—We give here a thoroughly trustworthy compilation, from the Government Statistical office, of the average yield of crops per acre in the *United Kingdom* for nine years. The yield of the turnip-crop seems small—11.86 tons—but it must be remembered that, in South and in South-East England, at least one-third of the average of turnips is merely a "catch-crop," many thousand acres of that root following rye, vetches, and even early grain. The average of potatoes is less than we fancied it would be—only 150 bushels of 60 lbs.

a really profitable pursuit. Of course, the thinning-out is the real trouble, and, until that has become a familiar process, no great advance will be made in the cultivation of the root-crop. But, if an English labourer, with his abominably clumsy hoe, can, and does, single half an acre of turnips a day, a *fortiori* could an American farmer, with his exquisitely handy hoe, get over the same area.

SOME of our English friends express great wonder that Americans are so long in learning the importance of root-culture for feeding stock. We be-

so many Vermont dairymen who went into heating water for their cows in winter abandoned it? Is there a reader who has discontinued the practice who will tell us why he did so?"

VERMONT WATCHMAN.

We have fed milch-cows extensively on roots, particularly in the hard winter, at Sorrel, in 1884, '85, and our practice has always been to allow the roots to remain in a bin in the cow-house for 12 or 18 hours before cutting up for the cows. If the root house is properly constructed, there is no fear of the mangels, &c., freezing; and,

have the effect of rotting the potatoes. We are sorry to hear that, in New-Jersey, many fields were destroyed. There, the planting was finished about May 20th, a full month later than last year. As there is every prospect of the government of the States lowering the import duty on potatoes next session of Congress, our home-growers of the crop will be wise not to hurry their sales in the autumn.

**THE BORDEAUX MIXTURE.**—A most useful public servant is Mr. L. R. Jones, Botanist of the Vermont Experiment-Station. He deserves credit for an original and striking device for advertising the use of the Bordeaux Mixture for potatoes. It consists of a very heavy piece of card board about 15 x 10 inches, with protected corners and a device for hanging up. At the top is a large, showy photograph of a field of potatoes showing a streak of dead vines where the mixture was not used, with sprayed portions on either side. Below, after giving facts about the crop, is printed in large letters—

TRY IT THIS SUMMER.

Bordeaux Mixture consists of  
 5 pounds of Blue Vitriol.  
 5 pounds of Fresh Lime.  
 50 gallons (Barrel) of Water.

Dissolve the Blue Vitriol in a wooden or brass vessel, slake the lime and dilute to a whitewash; strain these two solutions into a clean barrel and mix thoroughly. Keep the mixture clean to avoid clogging pump and nozzles. Add Paris-green for bugs if needed. (1)

Then follow brief directions for spraying. A copy of this card is to be sent to one person at each post office in the State to be hung in a prominent place. Now, this, to use a common expression, is business. It is the best advertising scheme that has yet been devised by any of the stations. We should like to have this card hanging in every post office and country store in this land.

**HOED CROPS.**—If, as there is every reason to suppose, the long persistence of rainy weather be followed by a drought, we cannot sufficiently impress upon our readers the absolute necessity of keeping the horse-hoe going between the rows of turnips, and other hoed-crops, as long as neither implement nor horse do any injury to the plants. The finely pulverised soil will induce the roots to travel out of the rows in search of moisture; we remember, in one very dry summer, seeing the roots of white-turnips meeting across the intervals between 24-inch rows; not rootlets, but good stout roots, as thick as the stem of a young clay-pipe; and we attributed the superior flavour and mildness of the turnips to the stirred soil enabling them to go along without a check.

Now, here is a paradox: we roll land to help it to retain moisture, and we hoe it to help it to get moisture: how is this latter proceeding to be accounted for? When there is no moisture from above, there is still a steady rising up from below, and, thus, capillary moisture is best prevented from escaping by a finely pulverised surface. Besides, this fine surface, practically, retains the dew, &c., better than a smooth surface.

**THE TURNIP-FLY.**—The *haltic-nemorum*, or flea-beetle, is so destructive

(1) We prefer the word *battles*.—Ed.

AVERAGE YIELD OF CROPS PER ACRE IN THE "UNITED KINGDOM" FOR NINE YEARS,

COMPILED FROM THE OFFICIAL RETURNS.

Years.	Wheat.	Barley.	Oats.	(Horse) Beans.	Peas.	Potatoes.	Swedes and Turnips.	Mangels.	Clover &c., Hay	Hay from Permanent Grass.	Hops.
1884	Bush. 29.90	Bush. 34.21	Bush. 37.85	Bush. 25.82	Bush. 24.63	Tons. 4.97	Tons. 13.12	Tons. 16.57	Cwts. —	Cwts. —	Cwts. —
1885	31.24	35.18	37.58	20.68	13.78	4.74	10.41	15.24	—	—	7.14
1886	26.89	32.32	38.46	27.09	27.31	4.31	14.75	20.13	—	—	11.07
1887	31.97	21.12	34.25	22.47	24.43	5.26	9.89	14.61	29.08	23.68	7.18
1888	27.97	33.03	37.95	28.61	24.20	4.00	12.51	16.78	31.51	33.06	4.81
1889	29.89	32.37	39.75	28.87	26.27	4.71	14.43	18.21	35.75	32.77	8.62
1890	30.66	35.23	41.54	32.77	28.71	3.53	14.27	17.76	33.19	30.81	5.26
1891	31.30	34.72	40.46	29.82	28.23	4.74	13.40	18.60	31.39	28.13	7.78
1892	26.48	31.78	39.82	22.33	25.85	4.45	14.04	17.99	20.10	23.30	7.35
Nine years' average .....	29.64	33.64	38.18	26.50	25.60	4.55	11.86	17.32	31.67	28.62	6.58
+ Increase } in — Decrease } 1892 compared with nine years' average }	-3.16	+1.14	+1.64	-4.12	+0.25	-1.10	+2.18	+0.67	+2.50	-5.32	+0.77

**STICKING PEASE.**—The tall marrow-fat pease—6 feet high—must, of course, be stuck, or brushed, as our neighbours call it. We never succeeded with wire, as the tops always broke off in a high wind. We prefer Bliss's American-Wonder for the first crop—10 or 12 inches high—and Daniel O'Rourke, &c., that never grow more than 3 feet long, for succession-crops. Sow deep—3 or 4 inches—and plenty of seed: 30 inches between the rows for the later kinds mentioned above, and 15 inches for the American-Wonder, will be ample space. The seed-tranches should be 3 or 4 inches wide, with a perfectly level bottom, so that pease do not roll together. Not half enough seed is generally allowed.

**ROOTS.**—A most satisfactory set of experiments have been tried at one of the U. S. Experiment-Station of the fattening of beasts on silage and grain, as against a ration composed of roots, silage, and grain. The conclusion arrived at is, that it is pretty clear that silage and grain, alone, do not furnish a ration that is altogether safe in finishing beef cattle; and second, they have proved in a comparative sense the great safety in feeding a ration of which roots are an important factor. Our advice, therefore, in the meantime, to those who are growing roots for this purpose would be to continue to grow corn in addition where this is practicable.

From an article in the "Vermont Watchman," by Dr Hoskins, it would seem that, in that State, farmers are beginning to see that growing roots is

lieve that a great many more roots could be profitably grown than are grown in America; but writers on the other side fail to give due weight to the fact that the countries where roots lead as a feeding crop cannot grow our Indian corn.

DR. HOSKINS.

C. F. Curtiss says, in *Rural Life*: "Mr. Hyatt is right in urging a more general cultivation of the root-crops. We hear men say, 'O, well, it does all well enough to talk about roots and nitrogenous feed, but give me an animal that will get along on what we can raise on the farm.' That may sound practical, but it is short-sighted. Nitrogenous feed and roots are natural products of a fertile soil, and the question that confronts the stock-raiser is not: Can I afford to raise them, but can I afford not to raise them? He ought to insist rather on his farm producing more nearly what his animals require, what will contribute to greater success and larger profits than that the stock manage to eke out an existence on the products of a limited cultivation. The root crop, if properly managed, is about as certain and about as easily raised as any crop grown on the farm."

"All these ideas have truth in them; but the difficult matter to decide is on which side the balance of utility is to be found. We are now inclined to think that the matter of tempering in the feed of the cows of a winter dairy will bear a great deal more study and careful experiment than has yet been given to it. Why, for instance, have

after all, the cow is not so terribly delicate an animal as she is commonly thought to be; though this is hardly a safe doctrine to insist upon in this country. What says the Report of the Minnesota Experiment Station on the subject of warm and cold water for cows?

"10th. With but one exception, the cows, while they ate less and drank less during the cold water periods, weighed more at their close; and, with but three exceptions, they weighed less at the close of the warm water periods."

But this does not imply that cows can be turned out of a warm cowhouse and sent to the water-trough with the thermometer at zero, and the ice a couple of inches thick. Far from it; the water should be always ready in the stall-troughs, and then, if the cowhouse is, as it should be, kept at a moderate temperature of, say, 56° F., there will be no need of heating the water.

Generally speaking, cows are allowed far too much out-of-door liberty in this province. We do not wonder that Monsieur Emile Castel, the Secretary of the Dairymen's Association, was so horrified at the condition of the stock in a *tournee d'inspection* he made last month. Let us hope that the prizes offered by the Department of Agriculture for winter-butter-making will have the effect of making our farmers more careful and more liberal in the treatment of their stock in the winter months.

**POTATOES.**—We mentioned, at p. 126 that we feared the copious rains of May and the beginning of June would