

The Jerusalem Artichoke a Substitute for the Potato.

Early in the season I furnished an article on the value of *Helianthus tuberosus* as an article of food to supply the place of the Potato, and it is with satisfaction that I now bring under notice the character of the substitute, which I am happy to state is found to be superior to the principal.

I forward a few roots, just as they were dug, with the tubers still attached to the stem, so that it may be seen what cultivation can accomplish with this much neglected plant; and, as an instance, of a plant actually grown in Britain by laboring men on poor soil far surpassing the potato, for the following reasons:—The haulm of the potato has always appeared to me to be an immense drawback from its importance as a profitable crop; not so with the *Helianthus*, for if it produced no tuber at all, it would still be the most valuable fodder-plant grown in this country, far surpassing, in weight of green food, Bokhara Clover or the like. Now, this is no hasty saying; for I have carefully weighed one square yard of the stems of the *Helianthus* and found them to be 32 lbs. weight, and this square yard was a fair average of the crop, and taken out of the middle of a piece not richly manured or highly cultivated, but that had come up from the small sets left in the land after the last year's crop had been gathered in. This circumstance is of considerable value, as showing to the agriculturist the important fact, that this crop wants no scientific tillage to produce a crop, and requires no small pains to prevent it from growing, and that most luxuriantly, in any reasonable locality.

Now, only consider the following simple fact, and compare the amount with other fodder:—30½ yards, or one pole, yield 968 lbs. of green food; that is, nearly half a ton from one pole of land, and gives in clear weights 69 tons to the acre, or about three times the weight of a good crop of Swede Turnips; and this, be it remembered, is altogether free of the tubers or main crop, and is merely the haulm, which in the potato, would be offal. I have given the leaves of the *Helianthus* to the goat, the pig, and the ass, and these agree that it is good, and eat it with avidity. When the cottager kept a pig, and grew potatoes, he was obliged to give the pig the tubers, which tubers were the only eatable part for man and pig; but in the *Helianthus* there is a line drawn of distinction, at the surface

of the ground; the upper part is food for the brute, while the under-ground stem contains flour (inuline) for man.

As regards the various modes by which the stems of this plant may be prepared and preserved for the food of animals, that is not in my department, although I could point out chaff-cutters or turnip-cutters that would slice them into sections as thin as wafers, and steaming apparatus that would reduce them to jelly. I prefer leaving that, however, to the proper parties, as I have neither the means or the leisure to carry the subject beyond my own line, namely the line of cultivation. I have picked out the sample sent from those that were most compact, and would beg to state that the rich, deeply-trenched land, caused the *Helianthus* to run to strong stems, thick and branching, and the tubers from such stems were placed deep and wide in the earth, and by no means equalled in weight of crop of tubers the less luxuriant plants. The plants on the very poorest soil grew just the reverse, and the tubers were nearly globular in form and grew close to the stem, whereas the rank stems produced elongated tubers on very long stolons. The sample is from neither of these, but from the medium quality of land, or what would be called good light potato land, one spit deep on the new red sand-stone. The plants were grown on demidykes or raised beds, as recommended and shown by an engraving in "Forsyth's Brochure," and stood in proportion to the land thus:—Two rows to every 6 feet, and the plants stood about 10 inches apart in the row, and supposing the whole field to be equal to the medium soil which produced the sample, there would be about 15 tons to the acre of good usable food for men; and when we compare the analysis given by chemists of the *Helianthus* and the potato, we shall find a heavy balance in favor of *Helianthus*, as being more nutritious in proportion to its bulk than potatoes. And lest the taste or the cookery should prove a stumbling-block to the introduction of this auxiliary to the potato in the eye of the household matron, I must remark in passing that *Helianthus* is second to none in making an "Irish stew," and this auxiliary to the potato (for I have not so far given up the potato as to speak of its successor as its substitute) will not only yield the tuber to make the Irish stew as the potato does, but it will yield fodder to fatten the mutton or other flesh meat to form the chief in-