

seeds than in the tropics; for the juices will never ripen so as to granulate, until checked by frost or fructification. In the tropics, the cane grows twenty months before the juices ripen, and then the culm has contracted a woody, fibrous quality to such a degree as to resist the pressure of the mills, and yields but little juice, and that to an increased effort. In Louisiana, we succeed well with the sugar culture, because, while the culm is succulent and tender, a white frost checks the growth, ripens the juices, and in five months gives us a culm, tender, full of juice, easy to press, and yielding much grain of sugar. When Louisiana, therefore, acquires all the necessary skill, she will most probably grow this article cheaper than the West Indies.

"Tobacco is a southern plant, but there it is always light and chaffy; and although often well-flavoured, it never gains that strong narcotic quality which is its only peculiar property, unless you grow it as far north as Virginia. In the south, the heat unfolds its bud or germ too soon, forces into full expansion the leaf, and drives it to seed before the narcotic quality can be properly elaborated. We may assert a general rule, applicable to all annual plants, that neither the root nor the leaf acquires any further size or substance after fructification.

"The tuberose, bulbous and other roots cultivated for human and animal subsistence, are similarly affected by climate, and manifest habits in corroboration of the above principle. The Irish potato, although from or near the tropics, will not come to perfection but in northern or cool countries, or in moist, insular situations, as Ireland. It is in such climates alone, that its roots acquire a farinaceous consistence, and have size, flavour and nutriment enough to support in the eminent way in which they are susceptible, animal life. In the south, a forcing sun brings the potato to fructification before the roots have had time to attain their proper size, or ripen into the proper qualities for nourishment. In Ireland, the plant grows slow, through a long and cool season, giving time for its juices to be elaborated and properly digested; hence that fine farina and flavour which characterizes them. The sweet potato produces larger, better flavoured and more numerous roots in Carolina, where it never flowers, than in the West Indies. In the latter place, this plant runs wild, covers the whole face of the earth with its vines, and is so taken up with making foliage, that the root becomes neglected, and is small and woody. In order to have the onion in perfection, it must grow through two years, swelling all the time its bulbs. In the south, however, it seeds in one year, and before it has made much bulb. Beets, carrots, parsnips, turnips, radishes and other roots are equally affected by a hot sun, and scarcely worth cultivating far to the south. They all fructify before they have formed perfect roots, and make foliage at the expense of their bulbs; hence they will always be articles of commerce. The south will have to depend upon the north for them.

"The salad plants are in like manner affected by climate, and give further proofs of our assumption. Cabbages, lettuces, endive, ocellory, spinage—plants whose leaves only are eaten—to protect their leaves from cold (through a kind of instinct), wrap them up in leaves which form heads, and render many of their other parts tender and crisp for use. These leaves, thus protected, are not only tender, but more nutritious, because their growth has been slow and their juices well digested. In the south, a relaxing sun lays open the very buds of such plants; gives a toughness and thickness to the leaves, and they are too unsubstantial for animal support, because of such quick and rapid development.

"The delicious and pulpy fruits are, in a still more striking way, illustrative of our principle. The peach, nectarine, plum, apple, cherry, currant, gooseberry, apricot and many other such families, are not in per