

use to it except for the support and solidity which it gives it? We see old piped trees flourishing away after all the heart is gone, and nothing left but a thin rind. True, the flourishing is not so vigorous as in a younger and more solid tree. No great sturdy arms are thrown out; and the foliage is limited to a few clustered scrubby twigs. But it does not follow that this weakness of growth is due to the tree being piped. In such cases, we must remember, that tree has generally been growing in the same ground for, perhaps, hundreds of years, exhausting all the ingredients of the soil which are suitable for elaboration into its sap and fibre—and that if we remove the tree, and plant another of the same kind in its place, it grows no better than the old one, seeming to show, at all events, that it is not the mere absence of pith and heart-wood in the old tree which has caused the declension in its vigour of growth.

The principles of physiology, therefore, would rather seem to say that in all those cases (such as fruit-trees, roses, etc.), where the acquisition of solid timber (whether for the support of the tree or for the uses of man) is not the principal object, grafting, although attended by decay, is not attended with consequences injurious to the purposes for which the tree is cultivated. But where timber is the object, as in forest-trees, the case is different. The decay imbedded at the base of the stem gives an element of weakness to the tree at the very point where the leverage of the wind is strongest, and exposes it to be snapped off by the root. I do not think it can be said to be injurious to the growth of the timber in other respects; for immediately above the graft the timber is deposited in a solid and continuous stream; and I see no reason why the tree, in all other respects, should not be as good as an unworked plant. Still we all have a prejudice in favour of seedling trees; and I think that the liability of grafted plants to breakage from wind is quite a sufficient reason why we should continue to retain it.

#### NOTES ON WINTER GREENS.



**B**RUSSELS SPROUTS.—Universally as this fine vegetable is esteemed, many amateur gardeners make mistakes in its management, and hence produce buttons far inferior to those to be seen in the baskets of the London greengrocers. Now, although tastes differ, we can safely say that this is the best winter green we possess, and especially worthy of being extra well grown, because the result of good culture will be handsome produce in such plenty as to prove that the liberal system is the most profitable. A short essay will suffice for all we have to say, but we wish it to be understood that every word is of importance.

The object of the cultivator should be to secure strong plants as early in the summer as possible. Therefore, the seed should be sown on a well-prepared seed-bed in February, or early in March, and the plants should be put out as soon as large enough to be

March.

lifted, and showery weather should be selected for the operation, or lacking rain, the plants should be shaded for a time, and regularly watered. A poor soil will not produce this vegetable in a state to be worth gathering; therefore, prepare for the plantation a deeply dug and well-manured plot. Our mode of procedure is to plant potatoes in rows four feet apart, and put out the Brussels sprouts between them two feet apart in the row. When the potatoes are taken up, the sprouts have the full breadth of four feet, and they very soon afterwards nearly meet across the rows, and it may be understood by that fact that we obtain our supplies of buttons from gigantic plants.

But we can do better than this, and now proceed to describe the better way. We make a sowing of seed in the first week of August, and as soon as possible thin the plants to three or four inches apart, and leave them to stand the winter. As early in March as weather will permit, we transplant them into the potato plot on a similarly good piece of ground in rows three or four feet apart, and they soon make a tremendous growth, and supply fine buttons in enormous quantity from the end of August until the month of March following. This practice answers perfectly on our cold damp soil, five miles north from London, and we take care to provide for the seed-bed a sheltered nook on the highest part of the ground. Were we located north of the Trent, we should sow in July to stand the winter in the open, and again in August for a few hundred plants, to be aided with some cheap protection. Whatever conduces to the early and luxuriant growth of this useful vegetable must be adopted as profitable, unless it is a very extravagant affair indeed. We expect to find our plants four feet high, and literally studded with round buttons the size of a small orange some time in the autumn, proportionate to the time at which the seed was sown.

Now, perhaps the reader would like to know what sort we grow, for there are many in the market, if we take the trade catalogues for gospel. Well, we always order "imported seed," and find that other so-called improvements are either no better or some degree worse. There are other valuable varieties of sprouts, such as the Feather-stemmed savoy, the Dalmeny sprouts, etc., etc.; but of Brussels sprouts there is but one variety, and genuine imported seed is the best.

One word more. The proper way to appropriate the plant is to remove the sprouts from the stem as soon as they are fully grown, and before they begin to expand. Continue this practice all through the piece from first to last, and when it appears that no more good buttons are coming, take the top cabbages, and you will find them a delicious vegetable, if nicely cooked. But if you take the top cabbage first, you will have very few good sprouts, and indeed what can you expect from the plants after they have lost their heads?

**SPROUTING BROCCOLI.**—This may be grown in precisely the same way as recommended for Brussels sprouts. If not well grown, it is simply unprofitable, but when well done is a most valuable vegetable, because it comes into use at a time when greenmeat is scarce. There are several sorts in the market, but only one is really



worth growing, and that is the old Purple Sprouting. However, the new White Sprouting is worth having where there is plenty of room, and a variety of spring vegetables is required. It is altogether too unproductive for a small garden.

SCOTCH KALE must be sown early and planted out early, and it cannot be too liberally cultivated from first to last. But if the ground is poor and the practice not quite first-rate, this is the best of all the winter greens, for it will make a fair return when badly treated. As to sorts, the old Tall Green Curled is the best, and we cannot advise the sowing of any other.

We plant Sprouting Broccoli and Scotch Kale in rows four feet apart, alternately with potatoes, and the plants touch one another long before winter, and present a most noble appearance. S. H.

## SEASONABLE NOTES ON BEDDING PLANTS.

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THE amateur who would have his flower-garden embellished in the most rich and tasteful manner during next summer must now be on the alert, and make preparations for propagating bedding plants of which the stock is insufficient, and for potting off geraniums and other things which were propagated in sufficient quantities last autumn. These matters are very frequently left until it is too late in the season to afford the plants an opportunity of becoming strong and properly hardened off, or until the pressure of other work prevents its being done with that care necessary to insure success. This being the case, it has occurred to me that a few hints will be of considerable service to many readers of the *FLORAL WORLD*, who may be anxious to do their best in raising a good stock of bedding plants.

Zonal pelargoniums, which have now become of such great importance in flower-garden arrangements, are best propagated in the autumn, as spring-struck plants do not flower so early when planted in their summer quarters. Yet if the stock of any of the varieties is short of the requirements, and the autumn struck plants have made sufficient progress to yield a supply of strong cuttings, a stock of healthy plants may be secured, provided there is no unnecessary delay. The most desirable way of propagating geraniums at this season of the year is to take off the tops and insert them round the sides of five-inch pots filled with light sandy soil; they strike more freely with the aid of a dry bottom-heat, and it is a most excellent plan to stand the pots on slates placed upon the flues or hot-water pipes. They may, with care, be struck on a hotbed, but with the moisture necessary for such things as verbenas or lobelias, they soon damp off. Whether the cutting pots are placed on hot-water pipes or not, water must be applied sparingly until they are furnished with

March.