

NARCISSUS BREEDING BY AN AMATEUR

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Two problems confronting the beginner in trying to develop new seedling *Narcissus*, is to determine (1) what crosses will produce seed, and (2) what crosses will result in worth while progeny.

In the first case there is too little authentic data in the literature to use as a guide, and what one does find is not always reliable for his conditions. Whether a particular variety will set seed often hinges on the source of the pollen. I have made repeated attempts to get seed from *Mrs. R. O. Backhouse*. This spring (1947) I tried again with pollen from *Hades*, *Mayflower*, *Central Park*, *Actaea*, *Gallipoli*, *Green Mantle*, *General Pershing*, and *Bulbodium conspicuus*. The only success was secured in the last named cross—one pod was secured which ripened 3 seeds. Whether these will germinate remains to be seen.

On the other hand, *Lovenest* sets seed rather freely. In my crosses this year good results were had with pollen from *Hades*, *Beersheba*, and *Stresa*. In previous years I have used pollen from *Ada Finch* quite satisfactorily.

As a rule it is not too difficult to get seed to set on *Beersheba*. This spring I used successfully *Ada Finch*, *Lovenest*, *Gertie Millar*, and *Stresa*.

One can sometimes take advantage of abnormalities in seasons to make certain crosses made possible by overlapping of flowering periods which would not normally occur. Generally *Fortune* with me blooms so early that I do not have much of value from which to secure pollen, or suitable varieties upon which to use the pollen of *Fortune*. This spring I secured 5 pods and 30 seeds from *Fortune* x *Ada Finch* and 4 pods and 65 seeds from *Ada Finch* x *Fortune*.

It might be of interest, if I had room, to tabulate all the crosses made showing the varieties used, the number which set seed and the number of seed secured. However, of the 99 crosses made, 50 set seed, and the total number of seeds secured was 2358.

The amateur is often handicapped at first by having limited stocks of the better varieties and this precludes securing large quantities of seeds from particular crosses. Perhaps this is just as well until such time as he can begin to determine which combinations hold the greatest promise. I have been going on the theory that even the experts do not know all the best combinations, so I go merrily on effecting all sorts of combinations depending on the particular varieties which may be in bloom at the same time. If some of them turn out satisfactorily, I shall be content, for one can learn as well from the failures. It sometimes pays to be ignorant for, if he does not know that certain crosses cannot be made, he tries them any way and may have some unexpected successes.

It is obvious that one should start with the best varieties that he

can afford to buy. However, most of the varieties are more or less hybrid in make-up and may carry latent characters which might be expected to appear occasionally from unpromising material.

To the beginner four or five years seems a long time to wait for the first seedling to bloom, but after having possessed himself in patience through this period, the way is happier from then on because he can look forward to some new appearances each year.

The crucial time comes when he must evaluate the new arrivals—to do this satisfactorily he needs to know something of the high standards reached by other breeders. It is only by comparison with the best that exist that the merits of the new seedlings can be ascertained. One cannot hope to buy all the latest introductions or even to visit plantings where they are blooming. One is fortunate if one can have those who are familiar with the advances made by other breeders to look over the new seedlings and to indicate what looks promising. With experience one can learn to form one's own judgments. As with other types of flowers, one will find plenty of good seedlings, but not many that are good enough to name and introduce to the trade. However, there is immense satisfaction, as far as his own garden is concerned, to have some seedling "just as good" even though not better than the best.

If all goes well I shall have my first seedling of the present series in bloom in the spring of 1948. (I did have some years ago a nice lot of seedlings from a cross of *Van Waveren Giant* x *King Alfred*). It will take several seasons, presumably, to get a good line on the combinations having the most promise and by that time one's own seedlings will no doubt enter prominently in the future crosses to be made.

One advantage which *Narcissus* breeding holds for the amateur is that he can raise a large number of seedlings on a relatively small plot of ground. It is not at all difficult to handle the seedlings. With small lots of seed, I use tin cans with the tops and bottoms removed. These are placed in a cold frame and filled with a mixture of sandy soil and leaf mold. The seeds are planted usually in October and covered about an inch deep. Germination is generally good early the next spring. Seedlings are allowed to stay in the cans through two growing seasons, then are transferred to well prepared beds where they are to bloom.

In preparing these beds I like to dig off the first four or five inches of soil and throw this to one side. Leaf mold and a good complete fertilizer is dug into the bottom of the beds, the surface levelled off and the 2-year bulbs put in place about four inches apart. The top soil is then put back to cover them.

Plant breeding is a fascinating pursuit for the appearance of the new seedling in bloom gives an added zest to the art of gardening. There is ample room for many more amateurs to take up this interesting hobby. They may never have the thrill of seeing some fine morning a seedling of theirs so outstanding that it will take its place along with the very best, but they can have a lot of fun just the same—and the *Narcissus* is a good place to start.