

and plant bugs; and such sappers of the turf as the clover root borer, white grubs, wire-worms and cut worms. It also preys upon burrowing bees and ants and the various small dung beetles that mine in putting greens and throw up those little hillocks of dirt that constantly interfere with good greenkeeping. The chippy does no harm, is beneficial in many ways, and withal is a very pleasant and sprightly neighbor

### Daffodils for Golf Courses

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When winter has gone, when spring has arrived, and when the urge of the open is upon us, the pleasure of one's leisure in the open is intensified by nothing more than by pleasing vistas of quickening verdure. Much has been done to beautify our pleasure grounds with "shrubs," "annuals," and "perennials," but upon our golf courses especially there is a notable lack of use of all early spring bulbous flowering plants so effective, so attractive, and so conducive to one's enjoyment in early springtime when the conventional ornamental plantings of our landscapes are only just awakening from their winter lethargy.

This is not because of the cost of such an improvement, for the beautification of landscapes by the use of bulbous stocks, especially daffodils, is not prohibitive. Indeed, it may be doubted whether a comparable effect can be produced as cheaply for an equal length of time for the same money with any other group of plants. Besides, the effect is easily attained and requires little skill in the distribution and the arrangement of the plantings. About all that is needed is to mass-plant on informal lines in open waste or unoccupied spaces in the edge of woodland, around the base of shrubbery, in the border of glades, or similar situations.

The handling of such a naturalized planting is simplicity itself and when once established requires a minimum of care and expense. In open glades, where there is naturally more or less forest debris, there may be needed no attention whatever. Often mowing once a year is advisable and, so far as daffodils themselves are concerned, there will be a decided advantage in leaving the mowings lie where they fall to help smother out some of the native competitive growth.

In many situations, however, on golf courses where naturalized plantings of daffodils are desirable, mowing and removal of the mowings is necessary. This applies to exposed situations and edges of shrubbery plantings.

To make a success of a naturalized planting of daffodils over a long period, and none other is worth while, the bulbs should not be set on any portion of the course where constant close cropping of the grass cover is required. Such close cropping of the grass from the last half of June on, however, is permissible, but the foliage of the daffodil must have about two months' time after the flowering period to properly mature the bulb for flowering again the next year. It will be necessary, therefore, to confine naturalized plantings of daffodils on our courses to such situations as can be left without mowing from spring to late June. During the remainder of the year close mowing can be practiced with removal of the mowings or not, as is most desirable or necessary.

The establishment of such naturalized plantings may be made in various ways. The area devoted to the bulbs may be placed in a thorough state of tilth, planted to bulbs, and then seeded any time from August to October, or, the bulbs can be planted directly among the native vegetation or in the grass sod, of whatever nature it may be, without putting the land under plow.

The method of setting the bulbs may also vary a great deal. Either a spade or a mattock make serviceable tools to plant with. The blade of either tool can be thrust into the soil its full length, the sod raised up sufficiently, the bulb inserted, and the sod pressed back into place with the foot. It does not matter if the bulbs are not set exactly vertical. If placed at an angle of  $45^\circ$  they will function just as well and the setting at such an angle is often more easily done, especially with a spade.



Narcissus Empress. Experimental planting at Bellingham, Wash.

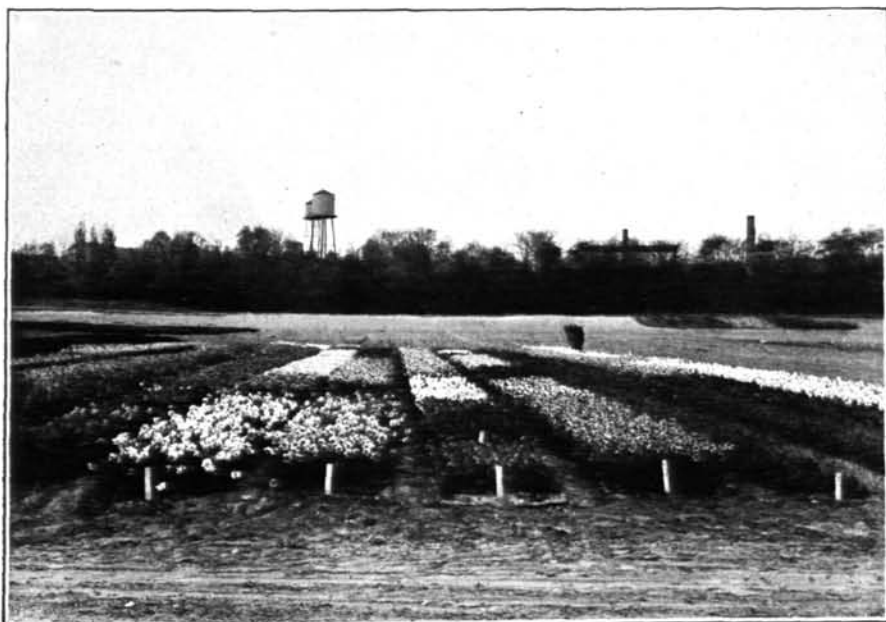
It must be seen to, however, that the bulbs are set deep enough. The danger will usually be that in hard ground workmen will slight the job and put the bulbs too shallow. There should be in a planting of this kind, which is intended to last more or less indefinitely, fully 4 inches of soil over the top of the bulb. If the soil is light, another inch or two would be an advantage.

The distribution of the material on the ground should be decided upon before the planting begins. If the workman plants without any guide, simply attempting to approximate this thickness of setting, the result will be informal enough, especially if a few scattering clumps are placed carelessly beyond the confines, so to speak. An effort should be made to vary the density of the planting a little, thus enhancing the informality.

Of course, the character of setting must be influenced greatly by the availability of stock, the area to be covered, and other considerations. If the amount of stock is small in comparison with the area to be covered, good results will be obtained by a very thin planting which will really be only scattered individual bulbs. These will in a few years, if the conditions are at all favorable, become clumps which will give a half dozen or more flowers each season.

If economy must be practiced, a thousand or even a few hundred bulbs set thus scatteringly may be dug at the end of three to five years for resetting over the same, contiguous, or different areas. It is surprising how rapidly stocks will multiply in this way. Five for one in five years would be moderate.

Should this sort of handling be planned, a scattered setting where the bulbs are set on an average of 5 to 10 feet apart would increase so



Various varieties of narcissus at Arlington Farm, Va.

that a thick enough setting would be possible in four or five years from the natural increase of the stock. The four or five-year old clumps could then be dug when the tops have turned yellow, separated, and reset again immediately on the same area, simply making a thicker planting.

We have considered thus far the aesthetic aspect of the naturalizing of daffodils on the course, but aside from this very important feature the utilitarian aspect should not be lost sight of, for in some cases at least this may have decided appeal. In our present condition, with references to daffodil stocks in this country, the accumulation of naturalized bulbs on courses and other little occupied areas may be made a very important adjunct of the bulb nursery business.

It is well recognized that old naturalized stocks undisturbed for years make the best kind of planting materials for the production of

merchantable floristic bulbs for the ordinary market. This opens up a vista of economic possibility in connection with these naturalizing operations without detracting in the least from their aesthetic value.

In order to make the bulbs available for use, however, it is imperative that all plantings should be pure, i. e., each variety by itself, because mixed daffodil bulbs are not usually wanted by the grower. This again does not detract one whit from the ornamental value of the naturalization. Indeed, to my mind a naturalized setting wherein a definite space, not necessarily with definite boundaries, is given over to one variety, is much more pleasing than a larger area devoted to a mixture. Here again conditions will govern the plan of distribution. The quantity of bulbs and the number of varieties must have the areas covered adjusted to them.

Something must be said about the varieties that should be employed. Availability under present conditions will be the most important consideration. The varieties used will also depend largely upon whether one has in mind ornamentation alone or ornamentation coupled with sales to growers later on.

If ornamentation alone is the goal, the cheapest varieties answer the purpose admirably. Conspicuous, Princeps, Recurvus, Ornatus, Mrs. Langtry, M. M. de Graaff, etc., will do. Spurius is already naturalized in tremendous quantities in grasslands in both Virginia and Maryland. In the South the tender Polyanthus varieties and the Jonquils, which are not expensive, are adapted.

Wherever a planting is made with the idea of supplying planting stock for commercial use, the varieties should be a little more carefully considered and they should be of a little higher quality. They will also be even more ornamental. Emperor, Sir Watkin, Golden Spur, King Alfred, Empress, Glory of Sassenheim, Spring Glory, Elvira, Laurens Koster, etc., might be suggested.

A naturalized area of any of these varieties when dug over for planting stock after a period of years will always have enough bulbs missed in the digging, and they are very likely to be suitably distributed to serve for the ornamentation of the area in the future.

To recapitulate: There are few lines of ornamental plantings for golf courses which are more promising than the naturalization of daffodils, and there are few today which are less in evidence or needed at a season when there is a dearth of floristic beauty. While the ornamental feature has in all probability the greatest appeal, it is perfectly practicable to make such naturalized plantings rather attractive investments which will serve a useful purpose in the establishment of a daffodil growing industry.

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Mr. H. H. Ramsay, Secretary of the United States Golf Association, announces that the Women's Committee for 1927 will be as follows:

Chairman, Mrs. Adams C. Sumner.....	Women's Metropolitan Golf Association.
Mrs. Edward H. Baker, Jr.....	Women's Golf Association of Boston.
Miss Florence McNeely.....	Philadelphia Women's Golf Association.
Mrs. Howard F. Whitney.....	Women's Eastern Golf Association.
Miss Eleanor Allen.....	Women's Eastern Golf Association.
Mrs. Alfred B. Swinerton.....	Women's California Golf Association.
Mrs. Robert Cutting.....	Women's Western Golf Association.
Mrs. Stewart Hanley.....	Women's Western Golf Association.
Mrs. Dave Gaut.....	Women's Southern Golf Association.