

THE COMPLETE GUIDE FOR GROWING AND EXHIBITING DAFFODILS

FIFTH EDITION

2010

OPEN GROUND CULTURE

Although the growing of exhibition daffodils in pots is widely practised, and this is discussed in detail later in this guide, a good percentage of enthusiasts will produce the majority of their flowers from bulbs grown in the open ground. However, in recent years this has become more difficult because of the change in climatic conditions with hotter summers and warmer and wetter winters. As a result many growers are finding a significant increase in the loss of bulbs due to both basal rot and the large narcissus fly. It is possible however, with good housekeeping and attention to detail, to limit these losses and growing any flower to a high standard has always been a challenge.

Soil Conditions

Almost any soil can be adapted to grow good show daffodils. Ideally the PH should be around 7 to 6.5 and should be cultivated to a depth of two spits with well-rotted animal manure or compost incorporated into the lower spit. Some growers prepare the ground almost a year in advance incorporating the manure or compost into both spits and then growing over-wintering broad beans which leaves them plenty of time to clear the crop and prepare the beds in time to plant their bulbs as normal. Most growers will also incorporate a general fertiliser before planting but this should not be high in nitrogen as this not only promotes foliage growth at the expense of flowers, but it has also been found that it encourages the basal rot fungi. John Pearson, a well known Daffodil Society member and breeder recommends the following fertilizer mixture. Five parts by weight of superphosphate, five parts of bone meal, five parts sulphate of potash and one part of hoof and horn at the rate of four ounces per square yard.

Whilst daffodils need plenty of water when in active growth most will not grow successfully in waterlogged conditions. It may be necessary to construct a raised bed system and incorporate sharp sand or grit into the soil and in extreme cases the installation of land drainage. Wherever possible choose ground that has not previously been used for growing daffodils in the last five years.

Planning the beds

When planning your bed layout there is a number of important points to consider. One important factor is from which direction is the prevailing wind? because if you intend to cover the beds at flowering time with polythene sheeting for example, then there will be the problem of holding it down if there is no shelter from hedges. However, modern windbreak netting material may overcome this problem. If there are hedges the beds will have to be far enough away so that the bulbs are not competing for light, moisture and nourishment. Wherever possible the paths should run east to west so that the rows of bulbs are planted north south which allows the sun to shine on both sides at sometime during the day. A convenient arrangement is for the beds to be 1m (3.3ft) to 1.2m (4ft) wide with the paths 0.6m (2ft) wide. This will allow you to reach the centre of the bed from a path at either side without over-reaching or damaging intervening flowers. Also remember if the beds are to be covered that in order to do this, a path will need to be created at the outside edges of the first and last beds. If “dutch lights” are to be used to cover the beds then the width of the beds should be so that the post- holes are in the path and it may be an advantage to erect the supporting structure before planting the bulbs.

Another important question is how long it is intended that the bulbs should remain in the beds? This was normally two, or even three years, with the grower claiming that the best flowers were produced in the second or third year when the bulbs had settled down and adapted to the undisturbed growing conditions. However, many successful growers now advocate a one year cycle of operations with selection of bulbs of a size which are likely to produce good show flowers and the preparation of a smaller bed which is easier to feed, water and cover. The smaller bulbs are then grown on in separate beds to be considered the following year for selection and planting in the “show bed”. Both systems are used successfully and it is a matter of choice for the grower depending on convenience and experience. It is likely that bulbs left in the beds to flower in the second year of a two year cycle will flower a few days earlier than if newly planted.

Planting.

It is helpful if the beds can be prepared well in advance of planting. This will allow weeds to germinate which can then be removed before planting the bulbs and the beds will require less weeding later. The bulbs should be planted at the end of August or early September though much discussion has taken place about problems caused by planting when the soil temperature is too high. Delaying beyond this time risks the bulbs not forming an adequate root system before the

winter, with a corresponding reduction in the growth and possible size of the flower in the following spring. However, over the past few years the onset of winter has been much later than the norm and it may well be that planting a little later when the soil temperature has dropped a few degrees, may become the normal practice with the changes due to global warming.

The bulbs should be planted in rows 25 to 30cm (10-12in) apart with 12-15cm (5-6in) between the bulbs in the row. The maximum distance should apply to the larger sized bulbs or the most vigorous cultivars. It can be convenient to have a planting board the same width as the bed, and the width of the distance apart of the rows. The distance of the space between the bulbs can then be marked along both edges for convenience of planting and all work is carried out from the board to save compacting the soil. A narrow trench is then taken out deep enough so that the base of the bulb is 12-15cm(5-6in) below the bed surface. Where basal rot is known to be, or expected to be, a problem, the trench should be some 25mm deeper so that a layer of grit or sharp sand can be placed in the bottom under each planting station. This will prevent the base plate from coming into direct contact with the soil and will certainly assist in cleaning the bulbs when they are next lifted as there will not be wet soil adhering to the base of the bulb. Some growers are also now treating the base of the bulbs with sulphur (to which other powdered fungicides could be added) in an attempt to combat basal rot. To assist in getting the powder to stick to the base of the bulb, first dampen it by pressing it onto a moistened piece of foam. As usual, please handle all pesticides with care and observe all the necessary safety precautions.

The start and finish of each cultivar will need to be clearly marked with a label, written with a weather- proof pen or perhaps printed with one of the modern label printers and securely fixed. In addition, a written record should be kept of the planting as the work progresses.

Winter inspections.

For the next few months the beds should be inspected regularly and any weeds removed whilst small, however, the most important task is to ensure that the beds have not become the target of voles, mice, rats, squirrels, moles or even deer, all of which can cause serious damage to the bulbs if left to carry on unchecked. If the weather is on the mild side throughout this time it may well pay dividends to reduce the slug and snail population using the organic method of baited traps. Whilst there is very little of the bulb growth to damage throughout this period, they can certainly cause havoc to the flowers in a few weeks time.

When growth begins.

Once the leaves begin to appear through the ground in late January and February then close inspection of the new growth should be made and any obviously diseased bulbs removed. Covering and shading of the beds is discussed later, but as the flower stems grow it will be necessary to provide them with support. One method is to have a strong cane at each end of the row in the bed and to tie strong twine to these so that it supports the foliage and flowers on either side. Alternatively, flowers stems can be supported individually by canes and if not covered then the blooms may be shaded by fastening cones at the tops of the canes. Without doubt this is the time period which is most demanding of the grower, however there is no point in good cultivation if one is not prepared to put the effort in to ensure that the flowers are presented on the show bench in its optimum condition. The collection and preparation of show blooms is described later

After the shows are over

Any covers should be removed to allow the sun and rain to get to the foliage and bulbs and should there be insufficient rainfall then the beds should be well watered so that they can continue in growth for at least six weeks after the flowering has taken place. Any flowers not used at the shows should be allowed to open to confirm that they are correctly named and then the flower-heads removed at the top of the stem. This is known as dead-heading and it is important that the flower stems are retained as the stem will provide as much energy back to the bulb as at least two good large leaves. Opinions are divided as to the value of feeding at this stage, particularly if using a one-year growing cycle. In any case only fertilisers with a high potash content should be used in order that firm, ripe bulbs are produced. A regular spraying programme throughout the growing period, using both insecticides and fungicides alternatively, in an attempt to keep the stock as healthy as possible is strongly recommended. As always, follow the manufactures instructions regarding dilution rates and handle all pesticides safely. When growing in the wild many daffodils species are subjected to a dry, hot summer which has been difficult to provide in the United Kingdom. It is alleged that much of the problem of basal rot is caused by the warm but wet summers we have. If dug up after the foliage has died back then the bulbs should be cleaned and if washed, and if a fan can be utilised this will provide air movement to help dry the bulbs dried as quickly as possible and placed in open trays constructed of wire mesh or the modern vented plastic crates are ideal, so that the air can circulate around them. When cleaning the bulbs it is vital not to damage the base plate or to break, or cut off, the root growth as this can allow the basal rot fungi spores to enter the bulb. If the earlier advice of setting the bulbs on 25mm of grit

whilst planting, the task of cleaning will be simpler and quicker without damage to the bulbs. After lifting and cleaning, some growers advocate the practice of dipping or soaking their bulbs in a fungicide or a very mild disinfectant solution. The trays should be placed out of direct sunlight and lower the ambient temperature. The bulbs should be inspected regularly both by eye and by lightly pressing the bulbs to ensure that they are not soft. Whatever the precautions taken, it is thought that greater losses occur in bulbs whilst they are out of the ground than in the soil. Some growers when growing on a two-year cycle advocate allowing weeds to grow on the daffodil beds to both confuse the narcissus fly and reduce the soil temperature at bulb level and perhaps reduce the amount of water reaching the bulbs. Another alternative when the bulbs are on a one-year cycle is to leave them in the ground, prepare the beds for the following year and then in late July, dig up the bulbs and replant immediately in the newly prepared beds. The bulbs are then out of the ground for only a matter of minutes. Leaving it any later can result in the bulbs having already formed some roots as a result of summer rain or if it has been a dry summer then digging up the bulbs at this time of year is much more difficult.

Increase and what to grow.

Under normal conditions an increase of 100 to 150% is easily achievable. Two bulbs will, even at the lower rate of increase, become 1000 in ten years time.

Conversely most growers find that certain cultivars or even some types, say white trumpets, do not thrive at all in their conditions, but this knowledge can only be gained by experience. If you are a new grower then look at your local shows to see what are the most popular and winning cultivars and although soils may vary over relatively short distances, local conditions are often reasonably consistent.

If visiting a local growers plot or even that of a raiser, try to gauge the “potential” of an individual cultivar. If there is a row with eight flowers of one cultivar then see how many of them are worthy of showing. Some cultivars produce a high percentage of “nicked” flowers and although one in twenty might be a potential Best Bloom in show, if space is restricted then those cultivars are best avoided.

The Daffodil Society’s list of Approved Cultivars for Restricted Classes contains over 250 cultivars with proven good show records over many years and which are low in cost. The success and experience to be gained by growing ten bulbs of one of these cultivars is many times greater than will be achieved by growing a single bulb of a cultivar which is ten times the price. In starting a collection therefore the new grower should always concentrate on proven cultivars with one or two higher priced novelties as a gamble. The increase in the popular cultivars should then in

future years allow for a greater number of newly introduced but higher priced bulbs.

As a final thought, always remember that you started growing daffodils for pleasure and when the toil and grind exceeds the pleasure then it is time for a rethink.

Covering and Shading Daffodils in the Open Ground

Many top growers would not dream of growing daffodils for showing without covering and shading. The thought of all the work of selecting cultivars, ground preparation and planting would for many be a complete waste of time and energy. It would seem pointless letting a couple of sunshine or rain, hail or a snow shower, ruin what could be a season's showing. What could be worse than trying to clean mud splashes or bird droppings from otherwise excellent blooms? You will only get out what you put into it, and as the saying goes "a job worth doing is worth doing well" so how do we go about it?

Commercial growers and keen amateurs of show daffodils seem to have adopted a method whereby they can cover individual beds say 1.2m(4ft) wide. This is very practical as any length of bed can be covered. Also the emphasis is on an easy means of erection and dismantling and the securing of the covering materials as quick access is needed for assessing blooms for display and showing. Since so many bulbs are grown relative to the number of flowers that are required for show or display, then the emphasis is on shading and wind protection rather than on complete protection from the elements. In this case a strong netting type will often suit their purpose well. In the case of the amateur grower the normal practice is to cover two, three or even four individual parallel beds within one structure. In addition, the height of the cover above the top of the flowers is much greater to allow the grower to be upright, or nearly so, in order to carry out the necessary duties with the most comfort. As stressed previously, it is essential that the proposed method of cover is planned at the time of planting rather than when the show season is approaching.

Chrysanthemum growers have for decades used structures where the top consists of 'dutch lights' and similar structures are also used for daffodils. The bed size is determined by the size of the glass and it is normal to have the glass frame at an angle rather than flat so that the rain water runs off the structure rather than collecting on top to eventually drip onto the prize blooms. When house guttering was invariably wooden then the gutters provided an ideal strong support at the lower end of the glass frame and conducted the water to one end of the structure where it ran off into the soil. The weights involved are very high, demanding large posts sunk into the ground and the construction usually requires at least two

willing helpers. Plastic guttering just will not support the weight. Although these “dutch lights” provide very good weather protection, additional shading must also be provided both on the top as well as at the sides.

Another grower uses the following alternative method to cover his two beds planted for exhibition, both 7m X 7m (24ft X 24ft), one for yellows and whites and one for red and pink cups. The wooden framework is erected during March and consists of four 210cm x 75mm x 75mm (7ft x 3in x 3in) uprights down the middle of the beds onto which are cramped “roof truss” type frames. These are lined up by two metal poles joined together and laid in “v” grooves cut in the apex of the roof frames to form the ridge. The side posts are then positioned to correspond with the ends of the roof trusses; these in turn are tied together by 5cm x 5cm (2in x 2in) lengths of timber running lengthwise. Intermediate roof struts and braces are then fixed making the whole structure rigid. During the construction “G” cramps make adjustments and lining up so much easier. Having completed the framework, 60cm (2ft) wide lengths of polythene are battened around the perimeter at ground level, forming a wind-break, which also helps keep out marauding cats. No covers are put on until buds start to show colour. As mentioned earlier the bulbs are planted in two beds and are also planted in flowering order for ease of covering. There are advantages and disadvantages in having one large cover. The disadvantages are, if covering takes place when the early flowering cultivars show colour then the later ones will only be two or three inches high or even less, resulting in these having weak or drawn up stems and also denying them rain water. To help overcome this problem protection is provided in the form of two temporary polythene covered frames 3m X 1.35m X 90cm (10ft X 4.5ft X 3ft) high. The frame covering the red cups is shaded with white cotton bed sheets to give extra protection from the sun. By the time the buds are breaking at the other end of the temporary frames the main cover is put on. If needed, the beds are well watered before covering, and must continue to be watered whilst covered. Covering, if possible, is best carried out on a warm, still day. The polythene is rolled out over the framework and kept in place with clamps. Starting from the centre, working towards the corners, the polythene is pulled tight and secured by battens nailed into the framework.

Fixing the polythene at this point enables the sides to be rolled up as necessary to allow for the circulation of air and makes it easier to water. For the last few years white “Rokolene” as opposed to green, has been used around the sides and top where required for shading and wind-break. White materials are much better than green, as they reflect the heat and have less tendency to draw up plants. The great advantage of having one large covered area is that, regardless of weather, it is

possible to work in relative comfort, making bed maintenance, recording, selecting flowers of note and cutting for shows much more pleasurable. There are, however, difficulties with even this method. A 9m X 6m (30ft X 20ft) sheet of polythene caught in the wind exerts a tremendous pull and therefore a helper at each corner is preferred although the “G” clamps are very useful. To minimise major problems the structure must be strong and secure, the polythene as tight as possible and spare battens available in case of emergency. The fixing of the polythene is vital since a piece which comes loose will cause significantly more damage to a bed of daffodils when caught in the wind than would the wind itself if the daffodils were completely unprotected

POT CULTURE OF EXHIBITION DAFFODILS

Why grow Daffodils in Pots?

In an earlier edition of this cultural guide it was stated that “most growers find that it was necessary to grow a proportion of their blooms in pots in order to obtain them in time for the shows in an unblemished condition that is essential if prizes are to be secured.” Although that is still an important factor it has possibly been overtaken by the advantage given by the greater control the grower has over watering and feeding and of choosing the medium in which the daffodils are grown. Flowers in the open ground, however well covered, are still to some degree at the mercy of the elements whilst in pots they can be moved about as desired from one environment to another in order to manipulate flowering time. Another advantage is that in addition to producing flowers for the earlier shows one can increase the range of cultivars available for the later shows which would not be possible from flowers in the open ground

Getting started- the end of the season

As with most things planning is important and the first decision is how many pots of daffodils can the grower cope with to be grown in this way. Not all cultivars respond to this treatment so it will be necessary to seek advice from other growers who are successful with this method. Initially, growers are unlikely to have sufficient bulbs of the right kind and condition to have an unlimited choice. Therefore a target should be set for a limited number of classes at one or two shows where one would like to do well. Draw up a list of cultivars already grown and those it is planned to buy which would be an ideal choice for an entry in these classes. Examine the bulbs available from those grown in the open ground and select good, round, firm single nosed bulbs normally give the best exhibition flowers when grown in pots. Unless large quantities are grown in the open ground, then these will have to be supplemented with bulbs of a similar size with

small offsets. Large multi nosed bulbs should be avoided as these will not produce quality flowers and also take up both pots and space

How to pot.

The choice of pot, whether clay or plastic, and of size is a matter of availability or personal preference if carrying quite heavy weights is a problem. Most growers have found little difference with growing in either clay or plastic. All pots must be clean and disinfected and well rinsed and allowed to dry before use. The optimum number of bulbs is probably five in a 25cm(10in) pot, three in a 22cm(9in), and one in a 18cm(8in). an extra one in the larger size pot is unlikely to make much difference but do not allow the bulbs to touch one another or be in contact with the pot. Always ensure that there is compost between them.

Compost

There are probably as many types of compost used as there are growers who use them. Standard proprietary composts such as John Inns, Levington or Arthur Bowers together with personal “magic”, and often secret ingredients usually work well and avoid the need to mix large quantities from scratch. One such mix in a Daffodil Society publication was two parts maiden loam from the turf stack, two parts peat and one part 3mm(1/8in) grit. To each bushel (four two gallon buckets) was added four ounces of John Pearson’s fertiliser mix together with four ounces of calcified seaweed. Plenty of crocks should be placed at the bottom of the pot to ensure good drainage and a handful of either well- rotted compost or coarse peat. This will not only keep the crocks clear of the compost but will also give the roots something to run around in Then fill with sufficient compost to within about 10cm(4in) of the top of the pot.

Next make an indentation in the surface of the compost where it is intended to sit the bulbs some 30mm(1 1/2in) wide and approximately 25mm(1in) deep with either your fingers or some convenient tool and fill these with sharp sand or grit. Then place your bulbs on the bed of sand or grit after treating the base plate as described earlier in planting in the outside beds. At this stage ensure that none of the bulbs touch one another or the inner surface of the pot then fill the pot with compost to within 25mm(1in) of the rim.

It appears that it makes no difference if the nose of the bulb is just buried or just visible above the compost. At this point insert the label with the name of the cultivar together with its division and colour codes. It is also useful for the new grower to record the flowering time as the plan was to give some cultivars slightly different conditions to manipulate the flowering time. The pot is then given a sharp rap on the potting bench to gently firm the compost and then stood in a shady spot and given a good watering and a check made to ensure that the

compost drains quickly. The aim should be to complete potting by mid September or as soon as possible in the case on newly purchased bulbs arriving after that date so that the bulbs have plenty of time to develop a good root system before the onset of winter.

The Plunge Bed

The potted bulbs cannot be placed immediately in the greenhouse. Although most daffodils are completely hardy, the roots of the bulbs in pots in the open would be damaged by frost through the pot sides. The pots are therefore placed in a plunge bed which can be of two types. The first method is to bury them in the ground to give a cover of 75-100mm(4in) of soil above the top of the pot. If a large number of pots are involved the provision of such a hole demands a great deal of back breaking work. The pots are then covered with a minimum of 150mm(6in) of straw, bracken or some other natural insulating material to reduce the amount of frost reaching the potting compost. A second and possibly the easier option is the use an empty cold frame or create an area using planks, breeze- blocks or the modern insulating blocks or even expanded polystyrene into which the pots can be placed. The pots are then protected between and above by peat, straw or leaf mould. The depth of your chosen material will need to be at least 105mm (6in) above the top of the pots since protection afforded will not be as efficient as the soil in the open ground. Whichever method is used, always ensure that the protection materials have not been treated with a herbicide as there is then a danger that this will leach onto the foliage as it emerges, causing serious damage. Also examine the area regularly to ensure that there are no interlopers such as slugs, mice, voles or even hibernating hedgehogs, all of which could cause problems. The best time to remove the pots from the plunge bed will depend upon a number of factors, including location in the country, the dates of the shows which are targeted and the progress of the growth within the bed. These can only be discovered with experience, but a guide is the end of January if in the north of England and Scotland, two weeks later in the Midlands and South. The More experienced pot-grower will learn to place the later flowering cultivars where they can be removed from the plunge sooner than those which normally flower earlier and which can be left for several days longer.

Removal from the plunge

As the pots are removed from the bed they should be cleaned, the soil, peat or straw removed from the top and the foliage examined for any signs disease. It may also be convenient to place in the pots the sticks or canes that will eventually

be used to support the foliage and flowers. After being placed on the greenhouse staging, then newspaper should be used to cover over the pale yellow foliage to protect it from the sun for a few days until it becomes green. After a few days a level teaspoonful of sulphate of potash is given to each pot, sprinkled round and well watered in. In the early stages only a little water should be given to keep the compost moist. As they grow the watering is increased so that by the time the foliage is 56cm(15in) high the pots are filled with water every other day. This will only work if there is good drainage. This level of watering continues right through flowering. It should not be necessary to provide any heat to the greenhouse and the temperature during the day should be kept as low as possible conducive to the rate of growth required to achieve flowering at the correct time. Maximum ventilation is also important with windows and even doors left open to create a flow of air. Even in March, the temperature in a small greenhouse can rise very rapidly and temperatures above 60 degrees F should be avoided if at all possible. Higher temperatures will produce earlier flowers but at the expense of the size and quality of the blooms. The atmosphere should feel buoyant and it may be necessary to increase the humidity in prolonged warm periods by spraying water on the floor. Some shading is likely to be required, either permanently coating the outside of the glass or by the use of blinds or other form, which can be applied only when necessary. Pots in which the flowers are developing too rapidly may be removed from the greenhouse to a cool shaded area. The flower stems and foliage will need to be tied to the stakes or canes previously inserted. It is often found with pot grown flowers that the flower position relative to the stem becomes irregular as it follows the sun. Very keen exhibitors will turn the pot 90 degrees clockwise each day in an attempt to avoid this.

Feeding

Most successful exhibitors who grow in pots advocate the use of liquid feeds with a high potash content, for example a 10-10-50 powder with added trace elements dissolved in water. Each pot is given half a pint every weekend starting two weeks after housing until flowering at the rate of one level teaspoonful in a two gallon can. Some cultivars with a weak stem ie “Dailmanach” and “Inverpolly” will have a couple of additional feeds of sulphate of potash after buds appear.

After flowering

Some growers will claim that the bulbs they take out of the pot is larger than the one that they first put in, but this is unlikely particularly if the flower and its stem have been removed for showing. Any flowers that have not been used should be dead-headed and the pots removed from the greenhouse to the area of the plunge bed as this is conducive for continued growth. The foliage is very important as it

provides the energy back for storage within the bulb for future performance. It will be less rigid and softer than if grown completely out of doors and will therefore still need to be supported to avoid damage.

Watering and continuation of feeding is still vital with the aim of having a firm and ripe bulb when all growth is completed. Two feeds of sulphate of potash can be applied at the rate of a teaspoonful dissolved in a gallon of water and about half a pint to each pot. The pots should be placed in a shady spot. As unprotected pots are vulnerable to the frosts in winter, they are likely at this stage to be overheated if left in the direct hot sun. When all growth is completed then the bulbs can be taken from the pots and treated as the ones from the open ground. Growing on for at least one year in a non-show bed is then recommended at which point they can be once again assessed for pot culture.

Conclusion

The work, and it can be very heavy work, involved in pot culture is much greater than the open-ground culture and should not be underestimated. It is time consuming particularly in the period before showing where to leave unattended an overheated, un-shaded greenhouse, can result in disaster. However, it can be also be very rewarding and has been very successfully used by many growers in recent years. After a succession of early seasons with allegations of global warming the next challenge may be to find a method of growing bulbs that will produce good flowers reliably for later shows.

GETTING THE BEST RESULTS WITH YOUR SHOW FLOWERS

Preparation for the show

What flowers you will have to show will have been decided some six months previously when you made decision as to which cultivars you were going to plant. You may also have had a target as to which shows you wished to attend and even planned in your mind the cultivars for the classes at some of these shows. Even with a large quantity of bulbs and skilful growing in pots it is very unlikely that you will achieve all that you intended, particularly if the season is unusually early or very late. This however, should not cause too many problems. There are around 200 daffodil shows in the UK each year. Details of most of these can be found on The Daffodil Society's web site and Their Journal. It is possible to show within a radius of say 75 miles at two weekend shows and one mid-week over a period of three or four weeks in most parts of the country. The first task is to obtain as many schedules as possible for the shows in your area from the shows you think you may well be able to attend. Many of the shows today do not require advanced entries for the single vase classes, only the multiple vase ones where the space

needs to be pre-allocated. Non the less, a note in your diary as to the date when a telephone call should be made to the Secretary of your intention to enter their show when advanced notice is requested. At least a week before the show, inspect the blooms to give yourself a reasonable idea of what you will have available.

This may only apply to the early shows because if blooms are being refrigerated then you may have cut many of the blooms required.

Cutting

Whether the bulbs are grown in pots or the open ground, the biggest mistake a beginner makes is to cut the flowers too early. Most cultivars in normal conditions will take at least seven days after the flower opens to reach prime condition. A good indication of this is when the pollen has formed on the anthers. In very warm conditions this time period may be reduced, but if it is very cold it may take as long as ten days. The second biggest mistake is to cut too many flowers for the show that you are about to attend. This results in a much greater problem in protecting the flowers from damage on the way to the show, greater indecision when choosing which flowers to put in which class, and ultimately poorer flowers in the following season. Cutting flowers with the stem results in less energy being returned to the bulb, so it is far better to dead- head a flower that is unlikely to be shown than to cut it "just in case".

Most flowers are best cut a couple of days before the show and will benefit by taking in water that can result in smoother petals. It also allows time to carry out preliminary cleaning of the flowers and the removal of insects such as greenfly and pollen beetles. Cut in the early morning when the sap is rising and before the sun has been shining on them for too long. A sharp knife is recommended and if you not sure that you will remember the cultivar name some means is required to identify the flower. Some growers often write the name on the stem but this needs to be well down near the bottom so that it does not show above the vase when staged, otherwise you may well be down pointed in close competition. A piece of card with a hole in the centre for the stem, pushed up to the back of the flower usually works well. Place the flowers in a bucket containing 5cm.(2") or so of water which is not too cold. Some growers will try to avoid any risk of the flowers touching one another and place wire mesh over the bucket to ensure this. Cut the flowers as close to the ground as possible but avoid cutting off any leaves whilst doing so. Some growers will even sterilise the knife after every cut with a sterilant, household bleach or surgical spirit, to avoid transmitting disease.

Cut only those flowers that are fully develop and only sufficient for the classes you intend to enter together with just a few spares. Any flowers that are too small to develop to show size or are badly damaged should be dead-headed when seen.

This will reduce the time taken to collect flowers on the next occasion because you will not be wasting time looking at these rejects again. Any cleaning of the flowers that you can do before you get to the show will be a bonus. Flowers often get marked by rain splashes or insects but this can easily be removed by a damp soft brush, cotton bud or even the tip of the tongue.

Attention should be given to the standard cultivars that are inclined to hang their heads. These can be placed overnight in a lit room with the back of the perianth towards the light which will cause the flower to adopt a more satisfactory angle with respect to the stem. Placing the flower face downwards with the stem on a table covered with moist moss at the end, and the flower over the edge will give the same results. Check that the brown sheath behind the perianth which originally held the unopened bud is not damaging the perianth; bend it away if it is, but do not remove it. Store the flowers overnight where they will be cool and undisturbed by family or pets. It is also essential that they will not be in direct sunlight as even the early morning sun can burn some orange-cupped flowers.

The day of the show

It will be a great help if you have a checklist of items required and actions to be carried out in a “show bag” in which you keep together all these items. These will almost certainly include the show schedule, a pen, cards(pre-written if possible) for cultivar names, lip pins, various brushes to clean and smooth flowers, cloths to clean your vases a small watering can to top up your vases, a towel to dry your *hands and the International Daffodil Register and Classified List to check the registration details.*

If you intend to stage your flowers with leaves then these will need to be cut, and a bag of moss chosen from stock obtained earlier if this is not provided. Most exhibitors use their own vehicle to drive to the show and often shade their flowers in transit with blinds or even paint their windows for the length of the showing season. Flowers can be transported in containers in milk crates or even larger containers if secure. However the flowers must not touch as they will rub together and be damaged by the motion of the vehicle. For large number of flowers and /or long distances then transportation of the flowers, dry in flower boxes or specially designed boxes is essential. It is easier to examine the methods used by other exhibitors than try to describe them here, but flowers will travel for twelve or more hours without significant problems. Set of in good time particularly if you are showing at a new venue

On arrival

The first priority when you have obtained a staging area is to look at the flowers, particularly if they have been transported out of water. At major shows large

containers will be available so that you can place the flowers in water before you start to collect your vases. Take only sufficient vases to contain the flowers you intend to stage. At most shows there is a shortage of vases until staging time arrives at which point they reappear in great numbers due to the selfishness of a few exhibitors. The exact method of taking entries and obtaining the card to go with each entry will vary from show to show, but wherever possible obtain these cards as soon as possible as they act as a checklist of the progress that you are making and the number of flowers you have left to stage. Some exhibitors prefer to place all their flowers in vases before any are moved to the show staging. This can cause murmuring among other exhibitors when the staging area is restricted and they are working on a handkerchief - sized space.

So in this regard and others that may arise, please show respect and courtesy to your fellow exhibitors and also to the show organisers and their helpers. Most exhibitors will place their flowers in the show vases and stage them a class at a time. We would recommend that the class card is placed with the exhibit at this stage. At every show you will see an exhibitor racing around the hall to find his exhibits and place his cards. Most are rarely 100% successful and judges and/or show organisers are faced with a decision as to deal with an exhibit which is a potential prize-winner but is without the required identifying card.

It is probably best practice to stage first the classes that require the most flowers, say a collection of six, nine or even twelve cultivars in individual vases. If there are various types and/or colour of vases, then make sure that you get the required number which are exactly the same. Stage each flower in the centre of the vase, and pack with moss so that there is no lateral movement but the flower height is able to be adjusted up or down. Usually you will have planned the cultivars to be used before arriving at the show and these will be together in the containers in which the flowers were transported. Place the flowers in the order in which you intend to place them on the tiered staging. Although it is the individual flowers which attract the most points, ten per cent of their total value is also available for presentation and coverage of the divisions. Factors which help to attract the maximum points on offer include the staging of alternate yellow and white perianthed flowers where available and the avoidance of the use of too many of the same colour, for example all yellow or all white flowers. Where two or more identically coloured flowers are used they should not appear, if possible, in the same vertical or horizontal row or column. Flowers should be wherever possible be matched for size, particularly those in the same horizontal row. The height of the flowers will obviously be determined by the length of the shortest stem. The flowers should be adjusted so that the top of the perianth is the same for all

flowers. Give a final wipe to the vases and top them up with water. All this can be carried out before the flowers are taken to the staging, but before doing so check that your exhibit meets the requirements of the schedule in terms of the number of divisions and/or types of flowers which need to be shown. When your exhibit is placed on the tiered staging, the width of the exhibiting space may be defined by tapes, and you may be asked by a steward to stage in a particular position. This is often done to ensure that unsightly gaps are not left between exhibits in a class. Please comply with the steward's request or you may find yourself being asked to move it at a later stage if space is required. Many exhibitors seem to be superstitious about a favoured position within a class or not wishing to stage next to a particularly impressive exhibit already staged. If Daffodil Society judges are involved then you can be sure that the position will have no effect upon the result. Make final adjustments to the position of the flowers so that they are all at the same height and also in the same plane when viewed from the side. Place your class card with the exhibit. When three flowers are staged in one vase then the centres of the three flowers should approximately be at the corners of an equilateral triangle. Most exhibitors choose to have one flower above the other two but this is not compulsory. When the exhibit is in a multi- vase, multi-bloom, then alternating the colours of the perianths will give a more pleasing effect. When staging is completed, tidy up your staging position, returning any vases not used and then have a final walk around to examine your exhibits. Occasionally you will notice a flower in a collection that has finally succumbed and needs to be replaced. This is the most dangerous time for errors to occur. Beware of placing two identical cultivars in the class when this is not allowed and check that your replacement still leaves the correct number of divisions which are required. It is impossible in a short article to cover all pitfalls of showing, but many of these can only be overcome as you gain more experience. The main aim is to ensure that you have made the best of your flowers and not made too many silly mistakes and are stimulated to do better at the next show or even next season. However successful you are please remember that you will always be judged more by the way you conducted yourself and the cooperation you show to your fellow exhibitors and show organisers, than by which prizes you win.

THE CONTROL OF PESTS AND DISEASES

The old adage “prevention is better than cure” applies here. Daffodils are no more likely than any other plants to contract disease. When contracted, some diseases, which are specific to daffodils will almost certainly result in the loss of the bulb.

The materials discussed here can only be a guide to the most commonly occurring problems with possible remedies. If a serious problem occurs which threatens large quantities of bulbs then seek professional help and advice immediately. Many chemicals used in control are only available for commercial use and not by the amateur grower and conditions of use are changing regularly by the authorities.

The Society therefore has to take great care in recommending the use of any chemical and **it is the users responsibility to ensure that any usage is safe and still appropriate.** Guidance and recommendations for the use of pesticides can be found on the web-site <http://www.pesticides.gov.uk>.

General preventative measures

Daffodils should not be replanted in a position where they have previously been down for at least five years, or even longer if new ground is available. Many soil based diseases are persistent and repeated growing on the same ground will result in a build up of these diseases. Narcissus is a genus within the family Amaryllidaceae and therefore should not be grown in close proximity to, or planted after, bulbs from other members of the family. Bulbs should be planted as far apart as space allows because overcrowding leads to the rapid spread of any disease that might occur. New bulbs are better in pot or in separate beds until it is confirmed that they are sound and disease free. Should any of these new bulbs emerge with signs of disease they must be dug up and destroyed. If this is a particular favourite and/or expensive acquisition then it could be replanted in a pot whilst the disease is diagnosed and if possible, treated.

Although all parts of the daffodil are considered poisonous, the newly emerging shoots are often eaten by rabbits and other grazing animals. Care should be taken to protect your beds from such marauders and also from voles, mice and moles, which although not necessarily eating the bulbs can cause significant disturbance.

While in storage, bulbs should be kept at a low temperature, out of direct sunlight and fans deployed to create a constantly moving air flow in order to prevent the development of disease.

Hot water treatment (HWT)

This method of control of disease, nematodes and narcissus fly has been used very effectively for about 100 years. It involves heating the bulbs in a container of chemicals for a fixed time period with very accurate control of the temperature to avoid damaging the flower potential for the following year. It is extensively used

in commercial bulb production and small units have been built and used by amateur growers. The Society will attempt to put anyone wishing to construct their own treatment plant in contact with one of these constructors in their local area.

Specific Pests

Large Narcissus Fly(*Merodon equestris*)

Once the was considered a serious pest only in the South-West of the British mainland. However, in recent years as a result of “global warming” and/or the influence of large plantings of daffodils by public authorities, it has now become a common problem even in the North of Scotland. The fly, which resembles a small bumble bee, is easily recognised by the high pitched whine it emits in flight and it is only active when the temperatures are in excess of 20oC(68oF) on windless days. Eggs are laid on the daffodil foliage near to ground level and hatch in seven days. At this point the larvae crawls down and enters the bulb by chewing through the base plate, where it remains, increasing in size by eating the centre of the bulb. It emerges from the bulb in March to pupate in the ground, and the adult flies emerges in April and May. Evidence of the presence of the fly are:-

In newly dug-up bulbs, the presence of a small hole in the base plate which is not easy to see. The bulb will still be firm as the larva is still quite small. In bulbs at planting time a soft bulb which when cut open, will display a large grub in the centre of the now hollow bulb surrounded by a mass of frass. In the open ground, the non-emergence of bulbs in the following season, or a mass of “grass” like growth from the base plate which is not always completely destroyed by the grub. This “grass” like growth, will, if left a few years, develop into flowering bulbs again with the normal lifting and replanting cultivation. There is now no chemical preventative or curative for this pest available to the armature grower. HWT will kill the grubs within the bulb but the damage has already been done. However, it may still be possible to save the bulb should it be a favourite or newly acquired expensive cultivar by cultivation as above. Should this pest be a particular problem in your local area then consideration should be given to covering the beds with either fleece or enviromesh to prevent the fly reaching the foliage to lay its eggs. It must be remembered that this will not be effective against flies that emerge from the ground when the cover is in place. It is also worth noting that this fly also use snowdrops as a host plant and this may be the reason for localised troublesome populations.

Small Narcissus Fly(*Eumerus* spp)

This is a much smaller fly which however can produce two or three generations per year. It is said to only attack already damaged bulbs but this has been questioned recently. Damage to bulbs in the ground is usually restricted to a few bulbs but a much greater threat to bulbs in storage where significant damage can occur. Several small maggots are found in the bulb than the single one in the case of the large fly. Control is as for the large narcissus fly.

Bulb Scale Mite (*Stenotasonemus laticeps*)

This has become a serious problem with the culture of many house plants or orchids. It is a light coloured mite which is only just visible to the naked eye and is likely to found only on daffodils in storage above 17oC (62F), where it attacks the top third of the bulb. It is killed by HWT and may controlled by an insecticide approved for that purpose.

Bulb Mites (*Rhizoglyphus and Histiostrongylus* spp)

A much larger Mite than the above which has two dark spots and usually only attacks bulbs in storage which are already damaged by fungal infection. Control is achieved by good hygiene.

Slugs and Snails

An increasing problem for daffodil growers where although causing normally minor damage to the foliage they may also be a vector in the spread of virus disease from already infected plants. They can create serious damage, usually overnight, to the flowers. Control is by an appropriate molluscicide, both pellet and liquid forms, or by hand at regular inspections. A more recent and organic method is the use of a nematode which specifically targets slugs. Early indications on effectiveness are promising in the reduction of keel slugs, which attack the bulb under ground.

Swift Moths(*Hepialus* spp)

A relatively minor problem with daffodils caused by the caterpillars making holes in the outer scales of the bulbs. Control is by the removal of weeds and grass on which the moth lays its eggs.

Stem Nematodes (Eelworm-*Ditylenchus dipsaci*)

The most devastating pest of daffodils and most feared by growers. It is not visible to the naked eye and the first symptoms are “speckles”, small yellow raised and lumpy lesions on the edges of leaves or stems. It will usually be accompanied by large areas of the beds with weak growth, stunted plants, or even where no growth is seen. Bulbs cut across will show brown rings where the individual scales have been attacked by the nematodes, Infected plants should be destroyed and care taken not to transfer the infection on boots or clothing.

There is no approved chemical treatment of eelworm in the ground and infected areas should not be reused for the growing of daffodils. HWT will kill the nematodes but this requires a high temperature, very careful temperature control and the use of approved chemicals within the solution.

Fungal Diseases

Basal Rot (caused by *Fuarium oxysporu,mF.sp. nacissi*)

This is the most serious daffodil bulb disease which although it was described a hundred years ago as a serious threat, is growing in intensity as a result of hotter summers. The initial symptoms is the premature dying back of the foliage which when investigated, or at lifting time, reveals a soft or mummified bulb containing a chocolate brown rot spreading upwards from the base plate. At this point recovery of the bulb usually becomes impossible. The bulbs can become infected in storage or after planting and spores become widespread and are viable for over ten years in the soil. Control is very difficult even commercially. Resistant cultivars such as St Kevern are grown, but even these are not immune. The avoidance of fresh manure or excessive nitrogen is essential and the early lifting of the bulbs is preferred. These should immediately be sprayed with a suitable fungicide and dried rapidly in a good air-flow by using electric fans. Storage should then be at a low temperature of 17-18C (62-64F) with planting in late September or early October when soil temperatures are lower. Bulbs in storage should be inspected regularly and soft ones destroyed.

Neck Rot

Less common than basal rot but also a growing problem. As its name implies the disease spreads from the neck of the bulb towards the main body. There is more than one cause. *Fusarium*, (see basal rot), *penicillium*, and *botrytis* (see smoulder) are all implicated but usually separately. Control is as for basal rot and possibly any fungicide approved for this condition.

Smoulder (caused by *botrytis narcissi*)

This is less serious than the rots as above, but results in a lower bulb yield and un-showable flowers until the disease is eradicated. The symptoms are the appearance of a mass of grey spores as the leaves emerge from the bulb, causing the leaves to stick together. It is most likely to occur in cold, wet weather. The flowers are often spotted and the leaves can be pulled away from the bulb revealing a grey mould at the base. It can also occur later in the season in cold conditions when it is less easy to spot. The primary infection usually occurs in the previous year so control is by HWT and foliar spray with an appropriate fungicide while the bulbs are in growth. Dead foliage should be removed from the beds that are left down for a second year.

Leaf Scorch (caused by *Stagonospora*)

Another problem that was originally confined to the South West of the country, but which is now more widely spread. The symptoms are leaf tips that become reddish brown with a yellow border. The flowers may become spotted and there is usually premature die back. Control is by application of an appropriate foliar fungicide spray and HWT

Viral Diseases

There are a large number of viral diseases that affects daffodils, the most common of which is yellow stripe virus. As its name suggests it is identified by yellow stripes on the green foliage which is more apparent as the foliage emerges and which often disappears as the season progresses. Other common viruses are cucumber mosaic virus, white streak virus and tobacco rattle virus. In some cases the flowers is also affected with “breaking” or light patches on the petals or dark streaks. In most cases even though the flowers are not affected there will be a loss of vigour and reduced yield in the plants involved. There are several vectors that transmit the various viral diseases including aphids above ground and nematodes and millipedes below ground. The spread of the disease may be slow or rapid throughout the collection but the only solution is to rigorously rouge any obviously infected plants It should be assumed that any very old cultivars are likely to be infected by viral diseases of this type and therefore it is probably wise to not grow them together with a modern collection. Some growers try to convince themselves the symptoms which they see are not viral but as a result of the plant being stressed. However, it is when the plant is when the plant is stressed that the virus will normally be able to be most easily seen and it is safer to assume the worst rather than risk infecting the whole of one’s collection.

Control is by destroying any infected bulbs and by controlling the agents that cause the spread of the disease by spraying regularly throughout the growing season to kill aphids and HWT for the control of nematodes.

Conclusion

As stated previously, daffodils are no more prone to disease than any other flowers grown for show. Basal rot is potentially serious problem all growers but many of the pests and diseases described above are unknown to, and will remain so, for the majority of growers. All the specialist daffodil suppliers threat their stocks with HWT that controls many of the problems. The Society however, recommends that at bulbs auctions held by its regional groups, bulbs are not offered for sale that have been donated by individual members. Although in the majority of cases they would be disease free, the risk of spreading disease outweighs the financial advantage to be gained.

Propagation by chipping and twin scaling

The multiplication rate of daffodil bulbs under normal cultivation methods is rather slow for most cultivars. Some growers, and especially keen exhibitors, may wish to speed up this process for those cultivars of proven worth on the show bench, this can be achieved by either chipping or twin scaling. Both methods require the same technique and equipment but the difference being that with chipping the bulb is divided into say four, or at most six segments where as with twin scaling there could be as many as thirty. Chipping is the less refined system and should produce flowering sized bulbs in three to four years. Twin scaling is considerably far more refined and it takes at least another two, if not three years, to reach flowering size. Hygiene is the watch- word throughout the entire operation. This includes your own hands, working surfaces, all equipment, materials and above all use only healthy bulbs. The bulbs for propagation should be selected and marked during the flowering season and only those producing the best blooms considered so that only the very best are increased.

Equipment needed.

A clean and sterile working surface.

A sharp knife, scalpel or razor blades

Industrial or surgical sprit or Milton

Vermiculite or Perlite

Boiled water

Small containers for soaking the bulb segments in fungicide.

Latex gloves

Small polythene bags.(clean and unused) 8”X 5” or similar.

A medium sized strong polythene bag (clean and unused)

A thermostatically controlled propagator.

Clean cloths

A roll of kitchen tissues.

A small bucket or bowl.

Fungicide. Systhane appears to be the only one now on the market for non-professionals although Milton can apparently be used for this exercise.

Preparation

Firstly, clean the selected bulbs of all loose scales, soil dead roots etc. and any dead tissue on the base plate whilst avoiding any damage to it. Do this work in an area well away from where you will be carrying out the main task of dividing the

bulbs. Don the latex gloves and wash down the working surface with the spirit or Milton solution. Cut open the medium polythene bag and lay on the work top surface. You now have a clean and sterile working area. Have a similar mixture of Milton solution in the small bucket or bowl to rinse your gloved hands between each of the following operations and use the cloths to dry them.

This mixture can also be used to swab the bulbs using the kitchen roll tissues before making the first cut. Prepare the Perlite or vermiculite by adding the boiled water at the following rates; 1 volume of water to 12 volumes of vermiculite or 1 volume of water to 15 volumes of perlite.

It is of the up most importance that the above volumes are measured accurately as excess moisture is the biggest cause of failure.

Prepare the fungicide according to the manufacturers instructions and distribute between the containers for soaking the sections of bulbs once cut.

Have another small container with enough surgical spirit or neat Milton in which to sterilise your knife between cutting each bulb.

You are now ready to commence operations. Firstly, take a bulb and lay it on its side and cut off the top by removing approximately a quarter of its height and discard. Swab it with either the fungicide or Milton solution. Now stand the bulb upright on its base plate and cut it in half down through the centre right through the base plate. You now have to choose how many chips you are going to cut the bulb into. If four, then cut each half down through the centre again and obviously if six or eight then each half will need to be cut into three or four accordingly, making sure that you cut through the base plate so that each chip has a portion it attached. Now place the segments into one of the containers of fungicide ensuring that there is sufficient solution to fully cover them and leave for approximately twenty minutes. Other bulbs can be treated during this time and as always, ensuring that the label accompanies each bulb with each move. Now stir and shake up the perlite or vermiculite to ensure that it is evenly moist throughout and place sufficient material into each of the small polythene bags. When the segments have spent the required minimum of twenty minutes in the fungicide solution, remove and allow surplus moisture to drain off or remove with a sheet of kitchen roll remembering to use a clean sheet for each bulb if doing so.

Place the segments in the bag and shake to distribute them evenly throughout the vermiculite or perlite and now close the bag leaving as much air space as possible and seal the bag with a twist-it tie and attaché the label to the tie. Place the bag in the propagator set to a temperature of 20-22C (68-72F). When all bulbs have been treated and placed in the propagator it will need to be kept dark by either covering or placed in an appropriate place for twelve to fourteen weeks during which time

roots or small bulbils will have developed. The segments can now be potted up into a sterilised compost and of course clean and sterile pots. It is essential that the pots are kept frost free during the winter period and growth will appear in the spring and continue until mid summer and die back as normal. Small bulbs will have now developed and can be grown on in the pots for a second year when they can be harvested as normal. They are then planted into beds to grow on for a further two or three years to reach flowering size.

Twin-scaling

If it is intended to attempt the twin-scaling technique then the above procedures are the same up to and including the cutting of the bulb into segments.

At this point each segment is laid on its side and the fleshy leaf-scales separated into pairs, hence the term twin-scaling. Each pair of the leaf-scales must have a portion of the base plate attached. The very small inner scales and the outer papery ones are discarded as they are very unlikely to produce new roots or bulbils. At this point the above procedures are then followed.

DAFFODILS IN BEDS, BORDERS AND FOR NATURALISING

Most gardens have at least a few daffodils growing somewhere with the intention to brighten up ones outlook after the long dark days of winter and to herald the onset of spring. The bulbs are normally a mixture of varieties, types and colours snatched from the Garden Centre shelf when advertised as “ideal for naturalising” and planted haphazardly around the garden with very little, if any, planning and probably even less preparation of the planting site. It is the intention of these pages to give the daffodil enthusiast and the casual gardener alike, some basic principals to get better results for the money spent buying the bulbs in the first place and a better return for the effort in planting them. Hopefully they will also give the home-owner and gardener a new approach to the planting and enjoyment of growing these wonderful flowers.

Planning

Planning before planting is probably the one thing that is given the least amount of time and effort. Yet when done thoroughly it can give a much better result and a far greater feeling of satisfaction when we get the effect we envisaged and hoped for. Rather than planting mixed varieties that will hopefully give a bit of colour over a long period, albeit rather sparse, a far greater impact could be achieved if say ten or twelve bulbs of one cultivar is planted in one clump.

There are also other benefits by doing this type of planting as all the after care such as dead heading, perhaps pest and disease preventative treatments, feeding

and clearing of the old leaves can be done without the probability of damage to flower if very late varieties are included with very early ones.

Whilst most daffodils do not like being planted under heavy shade there are those that flower very early in the year and will then get their six to eight weeks of growing to build up the next years flowers before the leaves of trees and shrubs cast too much shade. The Jonquilla (div 7) and Tazetta (div 8) on the other hand thrive where the soil dries out and they receive a good baking in the summer sun if such sites are available. Cyclamineus (div 6) will withstand a moist soil but like all others, will not survive water-logged sites. Wherever possible avoid planting tall growing cultivars in exposed sites but these areas could be ideal for the lower growing types. The Daffodil Society's Journal 2006 contains an article that explains how the Royal Horticultural Society conduct trials on numerous daffodil varieties each year. An Award of Garden Merit (AGM) is then bestowed on those cultivars that perform well in the open ground. Also included in the article is a list of all daffodil cultivars that have received the award in past years and well worth including in your planting schemes. Most bulb suppliers are now indicating this AGM in their catalogues where applicable these merits are ideal for this type of cultivation.

It must be remembered that if you plant daffodils under your lawn then you do so at the expense of a good sward as the grass cannot be mown until well into the month of June to allow the bulbs to build up next years flowers before the leaves are either cut off or allowed to die down naturally. Daffodil enthusiasts will argue that this sacrifice is worth it as they seldom lose bulbs due to basal rot or the narcissus fly when grown in grass.

Planting in grass

Where soils are relatively free of large stones one of those tools that take out a core of turf and the under lying soil is ideal. As a rule of thumb, the depth of the hole should be three times the height of the bulbs being planted. The bulb is then placed in the hole ensuring that it is upright before replacing the core of turf and avoiding too much pressure when firming so as not to crush the bulb.

If the soil is too stony for the planting tool to be used the turf will have to be cut and rolled back, the soil broken up and the larger stones removed from the immediate planting area before the bulbs are planted and the turf replaced.

When planting in grassed areas space the bulbs at least 250mm(9inches) apart to allow each bulb room to develop and reproduce naturally.

Planting in beds and borders

The soil where it is intended to plant daffodils in either the herbaceous border or amongst shrubs, will need to be broken up to a depth of at least two spits deep.

However, care must be taken not to create a water-logged pocket if the soil is of a heavy clay nature. If the soil is on the heavy side then the addition of coarse grit in bottom spit will improve the drainage.

Do not plant too deep otherwise the bulbs will have to expend a lot of extra energy to force the leaves through the soil before they can start the photosynthesis process at the expense of the flowers in latter years. It is recommended that one cultivar be planted in each clump of say ten or twelve bulbs as this will give a much greater impact at flowering time than if single bulbs are planted in a haphazard way throughout the border. As described when planting for exhibition, place the bulbs on a layer of at least 25mm of coarse sand or grit to help prevent basal rot and make cleaning the bulbs easier when lifted in three or four years time.

On completion, each clump should be clearly labelled with the name of the cultivar along with its registered division and colour. It is also wise to keep a paper copy of the plantings just in case the labels go missing for one reason or another.

AFTER CARE AND FEEDING

Once flowering is complete and the last of the colour fades away it is time to dead head so as to ensure that the maximum energy produced by the leaves goes into the development of next years flowers and not into what would no doubt be useless seed. All that is needed is to remove the old flower head but leave the stem intact as this can produce the same energy as two or three good leaves. On no account should the leaves be tied into bunches or plaited as this reduces the photosynthesis process and thus next years flowers. It is far better to leave them well alone and let them operate to their full potential for at least six weeks. Eight or ten would be even better. The bulbs would benefit from two or three high potash liquid feeds during the growing period but before the leaves start to fade. During this same time span a couple of applications of both an insecticide and a fungicide spray will be advantageous to the health of the bulbs. The feeding of bulbs planted under grass is not so easy as those in the borders as the grass would absorb most of the nutrients if fed as above during the growing season. It would be far more beneficial for the bulbs to have an application of Sulphate of Potash in the late summer or early autumn, say October.