Indoor Gardening
BY E. F. SCHAUFER

Winter Bloom from Bulbs

INTRODUCTION
Have you noticed potted daffodils, tulips, and hyacinths in bloom indoors in February and March? Have you wondered if you could have these in your home? It takes a little time in October to prepare these bulbs for forcing.

Activity requirements
1. Pot up, give cold storage treatment to and bring into bloom at least three pots of hardy spring-flowering bulbs. Use daffodils, tulips, hyacinths, or minor bulbs.
2. List in 4-H Project Record R-7-3 the name, number, dates of potting, date forcing began, and dates of flowering for the bulbs you grow.
3. Take one or more pictures of your bulbs at different stages and include them in your record.

NOTE: You must complete two other indoor gardening activities for project credit.

You will need:
1. Clay pans or pots.
2. 18 or more hardy spring-flowering bulbs.
3. Drainage material.
4. Soil mixture for-potting media.
5. Cold storage space at 40°F. to 50°F. for two months.
6. Bright lighted forcing space (sunlit window sills).
7. 4-H Project Record R-7-3.

HARDY SPRING-FLOWERING BULBS
The hardy spring-flowering bulbs are:
- Crocuses
- Grape hyacinths
- Daffodils
- Hyacinths
- Tulips (early, Triumph, Mendel)
- Snowdrops

These bulbs should be potted up by late October. Success with tulips lessens if they are potted after November 1. Recommended varieties for forcing are:

Daffodils:
- Carlton — yellow
- Cheerfulness — white
- Golden Harvest — yellow
- King Alfred — yellow
- Thalia — white
- Twink — primrose and orange
Forced tulips peer out a window at a wintry scene. All major hardy spring-flowering bulbs can be brought into blossom indoors in February and March.

Grape hyacinths are a blue-flowering bulb. Use 10 to 12 bulbs in a 6-inch pot for abundant color during February.

Hyacinths:

Bismarck — light blue
City of Haarlem — light yellow
Edelweiss — white
La Victoria — rose
Pink Pearl — pink

Tulips:

Bartigon — red
Prince of Austria — orange-red
White sail — white
William Pitt — red

WHAT TO DO?

Select containers for the bulbs you have chosen to force. The following list gives the approximate number of bulbs that will fit into various size pots. The inside diameter at the top of the pan or pot gives its size.

<table>
<thead>
<tr>
<th>Kind of Bulb</th>
<th>Number of Bulbs</th>
<th>Pot Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tulip</td>
<td>3</td>
<td>5 inches</td>
</tr>
<tr>
<td>Hyacinth</td>
<td>3 to 4</td>
<td>5 inches</td>
</tr>
<tr>
<td>Daffodil</td>
<td>3 to 4</td>
<td>7 to 8 inches</td>
</tr>
<tr>
<td>Minor bulbs</td>
<td>6 to 7</td>
<td>4 inches</td>
</tr>
</tbody>
</table>

Potting bulbs

You can purchase a house plant potting mixture, or mix your own by combining equal parts of sand, good garden soil, and organic matter.

1. Put a small amount of drainage matter (broken pottery, small stones) over the drainage hole of the bulb pots.
2. Put enough potting mixture into pots to allow bulbs to rest as follows:
   Tulips — bulb tops just above the soil line. Put flat side of bulb toward pot side.
   Daffodils — bulb tops even with top of pots. Because of size of bulbs, pots are better than pans.
   Hyacinths — bulb tops show just above soil line.
   Crocus, grape hyacinths and other minor bulbs — about one inch below the soil line.
   The soil line is one-half inch below the top rim of the pot or pan.
3. Add soil around and/or over the bulbs, and press the soil until it is one-half inch below the pot rim.
4. Water the soil until water begins to seep out the drainage hole.
Providing cold storage

Hardy spring-flowering bulbs need a period of two months at 40°F. to 50°F. to break dormancy and start growth. Tulips force better if given 10 weeks to 12 weeks of cold storage.

You can store bulbs in a dark, cool cellar if they are kept moist. Bulbs may also be buried outdoors in a trench. Dig an outdoor trench at least 12 inches deep. Set the potted bulbs in the bottom of the trench. Cover with 4 inches or more of a mulching material such as leaves or straw. Several inches of soil on top of the mulch will hold it in place. At the time of forcing, lift the mulch cover gently to avoid breaking off the shoots of the bulbs.

Success with forcing hardy bulbs depends on their developing a large amount of root growth during the cold storage period.

Forcing the bulbs

After the cold storage period, bring potted bulbs into rooms where the temperature is 60°F. to 65°F. Bulbs force best in a sun porch or other cool windows. Bulbs need high light intensity for stocky growth. Good light, cool temperature, and regular watering enables flowers to develop slowly and fully. Higher temperatures produce long, weak stems, and may cause buds to blast.

You can have blooms over a long period of time if you remove one pot of bulbs from cold storage every two weeks.

If you keep forced bulbs in your living room, remove them to a cooler room overnight. The blooms will last much longer if they are not left in a warm room continually.

Treatment after forcing

Bulbs used for forcing cannot be forced again immediately. Keep bulbs moist after blooming, and plant them outdoors as soon as the ground permits. After two growing seasons outdoors, they will bloom again.

TREATMENT OF TENDER BULBS

Tender bulbs do not require cold storage treatment.

Paper-white narcissus is good for only one blooming period. Grow them in any medium (sand, gravel, pebbles, or soil) that will hold the bulbs upright. Place them in bowls or low pots, and set them immediately in a well lighted location at 60°F. Temperatures of 75°F. or more are undesirable for they encourage weak growth and loss of flower.

Potting hardy bulbs is an excellent demonstration topic. This demonstrator summarizes the steps involved with a series of flip charts.

Daffodils are the easiest hardy bulbs to force. This demonstrator shows how successful her indoor gardening project has been.

This demonstrator shows how she potted tulips for forcing. The terrariums allow the audience to see how deep the bulbs were planted.
These bulbs have gone through the cold storage period and are ready for forcing. Snowdrops and crocus are in the front row, daffodils and hyacinths in back.

These hyacinths and daffodils were forced in a cool room to produce stocky firm flowers. High temperatures will cause buds to blast and leaves to fall over.

_Amaryllis_ is potted in the wintertime. Put one bulb in a pot, allowing an inch of space around the bulb. Leave the upper half of the bulb showing above the soil line. Give these plants good light, a good supply of water, and temperatures above 60°F. They will flower within six to eight weeks. Once they have flowered, keep watering the plants. _Amaryllis_ does better if the foliage is left on the plant and the plant kept growing the year around.