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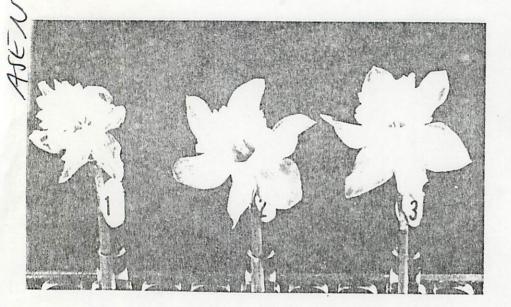
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Flowers last longer when stored first in nitrogen, tests show



May How do you extend the display life of cut flowers?

The answer, which florists and consumers alike would welcome, may come out of ARS research at Beltsville. Md. In recent tests, scientists prolonged the display life of cut daffodils by storing them in 100-percent nitrogen prior to display.

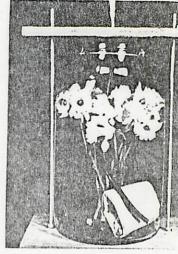
Plant physiologists Sam Asen and N. W. Stuart and horticulturist C. S. Parsons used King Alfred daffodils in the research.

How much the nitrogen extended display life depended on the storage temperature and the length of the storage period. Daffodils stored in nitrogen for 3 weeks at 32 F., the usual commercial storage temperature, had a display life of 125 hours against

85 hours for those stored in air under similar conditions.

Even at high storage temperatures, nitrogen increased the display life if the storage time was shortened; daffodils kept 21/2 days in nitrogen at 70 lasted 88 hours after removal, while those kept in air lasted only 21 additional hours.

Display temperatures were maintained at an average of 72-75, and display life was measured from the time the flowers were removed from storage to the first sign of deterioration of the daffodil trumpets. In the nitrogen atmosphere, oxygen was eliminated and earbon dioxide accumulation was minimized. Thus, carbon dioxide, which is known to have a beneficial effect on preserving



abution each fo aund. nationwie Daffodils held in nitrogen atmospheres (blooms 2 and 3) ledo consideration longer display life than those he wh influences in air (bloom 1). pop variety. (nf

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In effect, the researchers say, wents in 2,483 fe gen "anesthetizes" the cut daffodional nutrients a process that has been effective food. In 69 periods exceeding 3 weeks. Dafficearchers constored at 40° in nitrogen for as ensive data for as 3 weeks had a display life of 9 kg 751 foods. 100 hours equal to that of fre Values have n r additional fo cut flowers.

Much more research must be amitropical orig to determine what commercial arrely new forms cation can be made of the gas stopecially the conmethod. So far, daffodils are the many hon flowers that have responded favor ods. Data for to the nitrogen atmosphere: howend meats have b roses responded to ethylene oxid number and a previous tests (AGR. RES., Jamitive values have 1961, p. 11). Controlled atmospherision.

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