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RCMG MEETING
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NOVEMBER 5, 2019

Forcing Bulbs for Winter Blooms

Linda Bradley MG Class of 2006

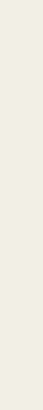
Topics

WHAT WE'RE COVERING

Key Concepts for Forcing Success
How To Force Step by Step
Presenting Your Bulbs



Photo from White Flower Farm





Flower magazine photo

Key Concepts for Success

- TERMINOLOGY
- BULB SELECTION
- BULB STORAGE
- TIMING CONSIDERATIONS

Terminology

FORCING

Bulbs may be grown (or forced) indoors by controlling light and temperature to create a favorable environment. Bulbs can be forced in water or soil.

BULBS

For presentation purposes, bulb is the generically used term for bulbs, corms and tubers.

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HARDY BULBS VS TENDER BULBS

Hardy bulbs require a chill period. Tender bulbs do not.

Hardy/Tender Examples

HARDY BULBS INCLUDE

Tulips
Crocus
Hyacinth
Daffodils
Irises



Photo from White Flower Farm
and Country Living

TENDER BULBS INCLUDE

Amaryllis
Cyclamen
Freesia
Oxalis
Paperwhites

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Bulb Selection Criteria

LOOK FOR SHORTER STEMLENGTHS

Stems 12 inches or less will be more likely to stand up in a pot.

CHOOSE EARLY BLOOMING VARIETIES

These bloom even earlier indoors and require less chill time.

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BIGGER BULBS ARE BETTER

Large bulbs often produce multiple blooms; sometimes one at a time, prolonging the show

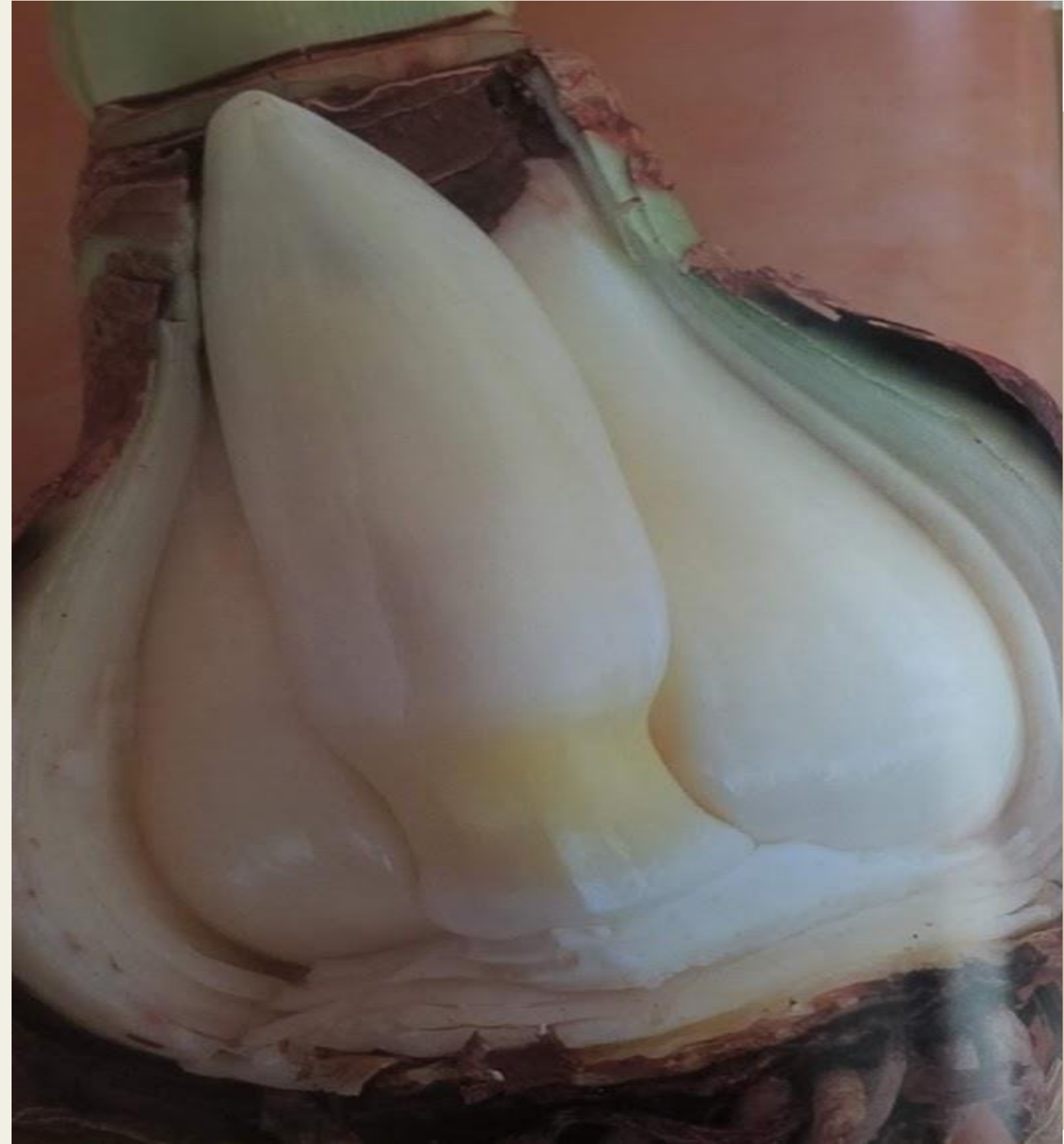
WHY BULB SIZE MATTERS

Bulbs contain their fully formed flower buds

e.g. Amaryllis

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Photo: Amaryllis by Starr Ockenga



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Amaryllis Production by Bulb Size

BULB SIZE	NUMBER OF STEMS	NUMBER OF BLOOMS
26 - 28 cm	1	3 - 4
28 - 30 cm	1 - 2	3 - 4
30 - 32 cm	⁸ 2	4 - 5
32 - 34 cm	2	4 - 5
34 - 36 cm	3	4 - 5

Chart : Longfield Gardens.com Pinterest Photo

Bulb Storage

REFRIGERATION

Hardy bulbs can be stored in paper bags in the refrigerator but only if there is no fruit in it.

Do not refrigerate tender bulbs

KEEP COOL AND DRY

A cool basement or a garage works if above freezing

Use styrofoam if there is a chance of freezing ⁹

A SEALED CONTAINER IS BEST

An old tin or a plastic storage box will keep pests away.

Boxes may not be suitable.

Key Timing Factors for Forcing Bulb Blooms

POTTING DATE

The start date for your schedule.

COLD PERIOD

Weeks of chilling required for hardy bulbs.

WARM PERIOD

Time period after chill for hardy bulbs.
Only time period for tender bulbs



TIMING YOUR BLOOMS



DO YOU HAVE A GOAL IN MIND?

e.g. Blooms for New Year's Eve
Blooms from Thanksgiving until the end January

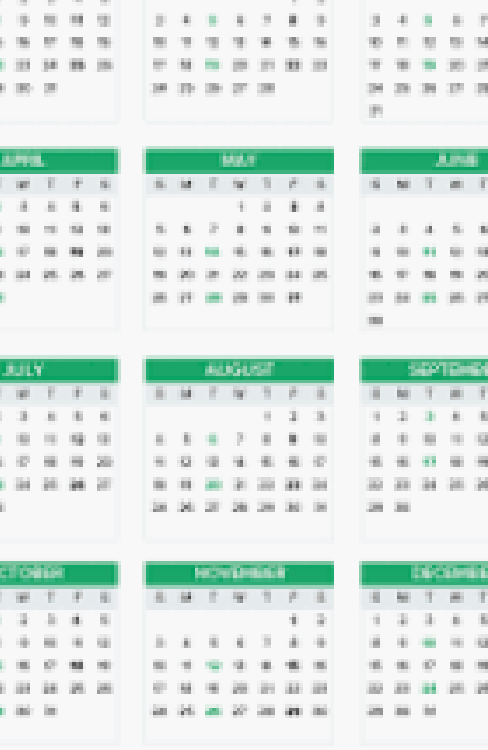
WHICH BULBS TO USE?

Select varieties and colors

ESTABLISH A SCHEDULE

Put dates on a calendar to keep track of the necessary steps to meet your goal.

Forcing Timeframes



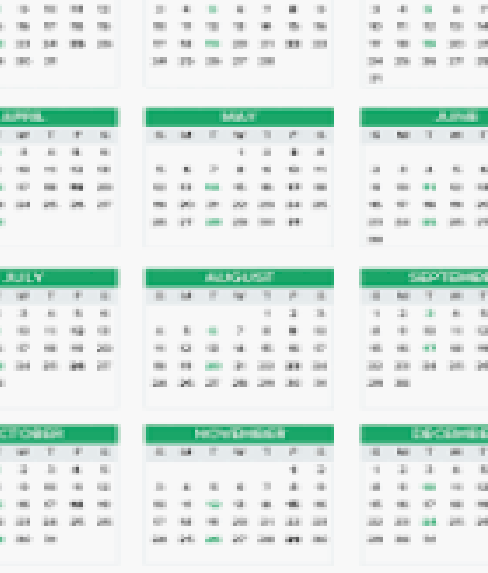
BULB	COLD WEEKS	WARM WEEKS	TOTAL WEEKS
Amaryllis	None	6 - 8	6 - 8
Paperwhites	None	3 - 5	3 - 5
Crocus	10 - 12	2 - 3	12 - 15
Hyacinth	12 - 15	2 - 3	14 - 18
Muscari	14 - 15	2 - 3	16 - 18
Narcissus	12 - 17	2 - 4	14 - 21
Tulip	14 - 16	2 - 3	16 - 19
Iris	12 - 15	2 - 3	14 - 18

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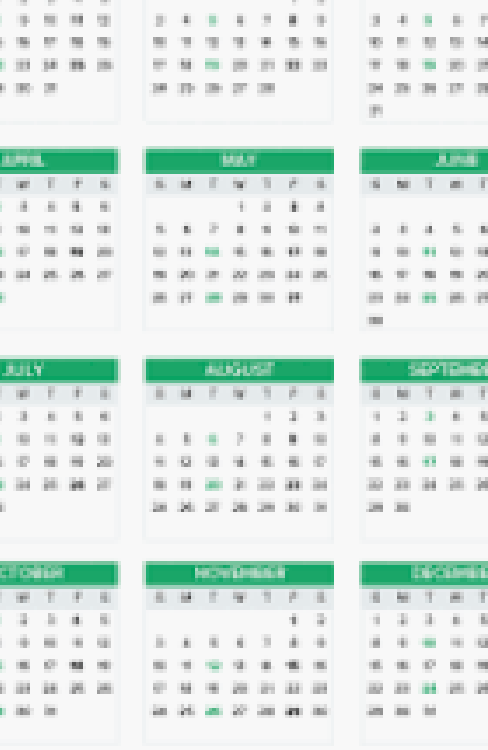
Keeping Blooms Coming



BULB	TOTAL FORCING WEEKS	WEEKS IN BLOOM
Amaryllis	6 - 8	2- 3
Paperwhites	3 - 5	2
Crocus	12 - 15	2 -3
Hyacinth	14 - 18	2
Muscari	16 - 18	3
Narcissus	14 - 21	2 - 3
Tulip	16 - 19	1 - 2
Iris	14 - 18	2 - 3



Continuous Blooms Paperwhite Example



BULB	TOTAL FORCING WEEKS	WEEKS IN BLOOM
Winter Sun	3	2-3

POTTING DATE

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- November 1
- November 14
- November 28
- December 12
- December 26

BLOOM PERIOD

- November 21 - December 5
- December 5 - December 19
- December 19 - January 2
- January 2 - January 16
- January 16 - January 30

Ednie photos

WINTER BULBS



Home depot.com photo;
FifthSeason.com photo

How to: Getting Your Bulbs Growing



FORCING IN WATER VS.
FORCING IN SOIL

FORCING IN WATER

Pros: Simplifies the preparation.
Store hardy bulbs in paper bags in the refrigerator for the chill period.

Cons: Bulbs are not reusable after being forced in water.

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www.dutchbulbs.com photo





SELECT A VASE

Use a container that supports the flower stalks.
For single bulbs, the clear glass hourglass vase works well.

POT IT UP

Use stones, marbles or shells to keep the bulb above the water level

Bulbs should be placed pointy side up in the vase

Fill the water over the roots and below the base of the bulb

MONITOR

Place the vase in indirect sunlight to let the roots form

Move¹⁷ into brighter light as the stem emerges and keep watered

As the stem grows, turn the vase so that the stem stays straight

Enjoy your blooms!

FORCING IN WATER

STEP BY STEP

FORCING IN SOIL

Pros: Bulbs can be planted outdoors after forcing, if zone appropriate

More flexibility in how to display them

Cons: More preparation up front

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Photo: Linda Bradley



Bulb Planting Depths

BULB	PLANTING DEPTH
Amaryllis	1/4 of bulb out
Paperwhites	1/4 of bulb out
Crocus	1 inch deep
Hyacinth	Top of bulbs out ¹⁹
Muscari	1 inch deep
Narcissus	1 inch deep
Tulip	1 inch deep
Iris	1/2 inch deep

Generally, forced bulbs can be planted more shallowly than in the garden. Be sure to allow enough room for roots to form.



GETTING THE POTTING SOIL RIGHT

Plain potting soil is good for tender bulbs

Mix 3 parts potting soil to one part sand for hardy bulbs

POTTING UP

One type of bulb in a pot makes it easier to manage the chill period

Place a coffee filter over the hole, then add a bit of gravel

Partially fill the pot with soil, firming well

Set the bulb pointy side up

Forced bulbs can be planted close but not touching

Bulb planting depths vary, so add more soil accordingly

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LABELING AND SCHEDULING

Label the pot with the type of bulb

Add dates to the calendar for planting date and the end of the chill pd.

FORCING IN SOIL

STEP BY STEP

CREATE THE COLD

Place in cold and dark for the designated time period

Between 40 and 50 degrees F works well

WATER SPARINGLY

Water lightly once a week to keep the soil moist but not soggy



Gardeners World photo.

CHILLING HARDY BULBS

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SEE SOME GROWTH

You should have shoots about an inch or two long

TRANSITION SLOWLY

Move them first to a cool location with indirect light



Linda Bradley Photo

Caring for bulbs during the warm period

CLOSING IN ON THE BLOOMS



THEY CAN GROW IN LOW LIGHT
Once the leaves are green and the bulbs are set, sunlight is not required for blooms.

WATER REGULARLY
Keep soil moist but not soaked.

KEEP THEM COOL
Let them mature more gradually by keeping them out of direct sunlight

CARE TIPS FOR BULBS DURING THE WARM PERIOD



**Also works
on Amaryllis**

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STUDY DONE AT CORNELL
Proved that alcohol — gin, vodka, whiskey, rum
or tequila (in moderation) — prevents
paperwhites from flopping over.

WATER WITH A MIXTURE
mix one part alcohol to seven parts water.

KEEPS STEMS SHORTER
Stems are 1/3 shorter and flowers are not
affected

**KEEPING YOUR
PAPERWHITES FROM
FLOPPING OVER**



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Longfield Gardens Photo

Displaying Your Bulbs

ENJOYING THE FRUITS
OF YOUR LABOR



COVER THE GROW POT OR TRANSPLANT

Slip the grow-pot into a cache-pot
Repot the bulbs into a decorative pot

OTHER CONSIDERATIONS

At this point, drainage is not critical
Pots need to be deep enough to hold the bulbs
upright
Add aquarium charcoal to the bottom to absorb
odors of stale water

SINGLE BULBS AND SINGLE VARIETIES

DISPLAYING YOUR BULBS



COORDINATE BLOOM TIMES

Plan and schedule your bulbs to bloom at the same time
Chill varieties separately(if needed)

TRANSPLANT INTO A DECORATIVE POT

Make sure the pot is large enough and deep enough for all
the bulbs
Arrange bulbs to your preference
They can be planted close together



CREATING A BULB GARDEN

DISPLAYING YOUR BULBS

In Summary: Planning is Key

HARDY OR TENDER?

Get the time to bloom and planting depth

WATER OR SOIL?

Prepare for the actual forcing process

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HOW TO DISPLAY?

Decide what your final presentation will look like

How many of each bulb

Colors

Location



Pinterest Photos



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BOOKS

Forcing, etc. by Katherine Whiteside

The Indoor Potted Bulb by Rob Proctor

Amaryllis by Starr Ockenga

WEBSITES

Longfieldgardens.com

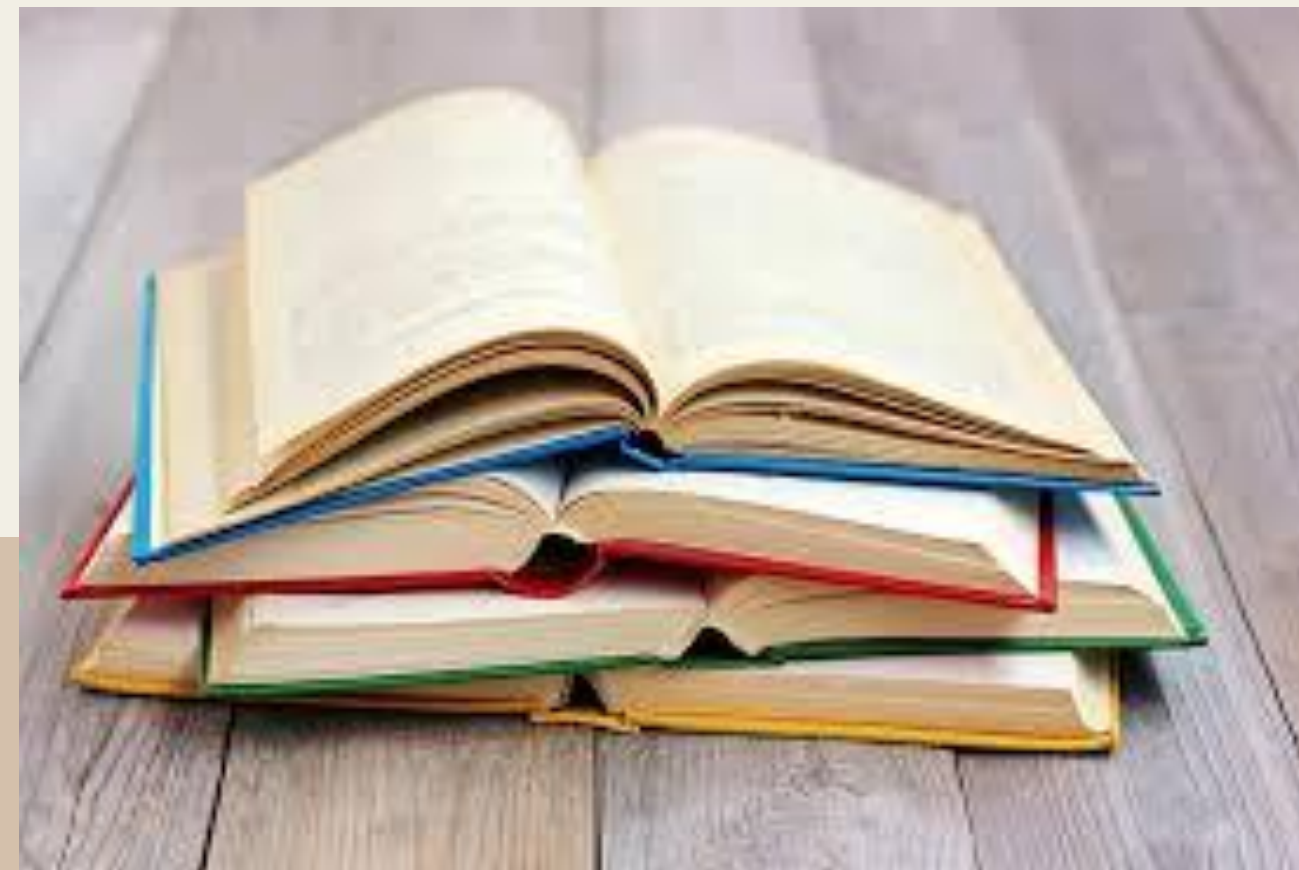
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http://www.hort.cornell.edu/miller/bulb/Picking_your_Paperwhites.pdf



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Questions?

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