

2016 EASTER LILY SCHEDULE

Weeks Prior to Easter	Date	Forcing Method	
		Case-Cooled	Pot-Cooled (CTF)
23	Oct. 18	<i>Bulbs dug, shipped & in hand by mid-Oct. Treat bulbs for mites before cooling begins.</i> Start bulb programming as soon as bulbs arrive but no later than 23 weeks before Easter. <i>Cool at 40-45F for 6 weeks</i>	
			<i>Pot & allow roots to grow at 60-62F for up to 3 weeks</i>
20	Nov. 8	---	<i>Cool at 40-45F for 6 weeks</i>
17	Nov. 29	Pot no later than 17 weeks before Easter Force in greenhouse at 60-62F in pot.	---
14	Dec. 20	<i>Roots visible by week 15 & shoots emerge by week 14. Start fertilizing & keep moist.</i>	Force in greenhouse at 60-62F in pot (no later than 14 weeks before Easter).
13	Dec. 27	1-2" tall. Apply insurance lighting if necessary, just as lilies emerge. Keep lilies moist & use fungicide drench as needed.	
12	Jan. 3	2-3" tall. Bud initiation coincides with stem root development. Run 60-62F-day/ nights until bud set is complete.	
11	Jan. 10	3-4" tall. Apply growth regulator when 3-5" tall. Bud initiation nearly complete, maintain temperature below 65F until done.	
10	Jan. 17	Check for bud set. Begin leaf counting & graphical tracking. Keep greenhouse cool if ahead of schedule.	
9	Jan. 24	5-6" tall. Adjust temperatures as needed. Space lilies to avoid yellow leaves & stretching. Apply Fascination to lower leaves (7 to 10 days before visible bud) if leaf yellowing is evident.	
8	Jan. 31	Check for aphids & root problems. Apply Marathon sometime during weeks 10, 9, or 8. Soil test & if leaf scorch is evident, use calcium nitrate for balance of schedule.	
7	Feb. 7	7-8" tall. Lilies are about half final height. 42 days to sale. Buds can be felt. If buds are visible on early planting run 60F until finish.	
6	Feb. 14	35 days to sale. Buds should be visible no later than 30 days prior to sale. Grade for uniformity as buds become visible.	
5	Feb. 21	Buds 1/2-1" long. Re-apply Fascination if necessary.	
4	Feb. 28	Buds 1-1 1/2", some bending down.	
3	March 6	Buds 1 1/2-2" long. If aphids present, use a total release smoke or aerosol.	
2	March 13	Buds 2 1/2-4" long, some turning whitish. Stop fertilizing just before sale & apply clear water once. Cool lilies at 35-45F to hold. Prior to cold storage, Fascination can be applied to entire plant.	
1	March 20	Ready to sell. Shade lilies once removed from storage. If needed, use EthylBloc prior to shipping.	
0	March 27	Easter 2016	

COMMENTS ON THE 2016 EASTER LILY SCHEDULE

Easter 2016 outlook: *Easter arrives early in 2016, providing growers little room for error in timing the lily crop. With early Easter dates, it is important to recognize which parts of the forcing process are critical and which parts can be sacrificed or modified in the interest of time.*

Pot-cooled bulbs are normally potted & held for 3 weeks at 63F before starting 6 weeks of bulb cooling at 40-45F (see the 2016 Easter Lily schedule for details). The bulbs then require 14 weeks of greenhouse forcing. This entire process requires 23 weeks from initial potting to Easter. This same process is used for both naturally cooled or CTF bulbs. If bulbs arrive too late to complete the full schedule, reduce the pre-cooling period so that the 6-weeks of cooling begins on time.

Case-cooled bulbs require six weeks of cooling followed by 17 weeks of greenhouse forcing to flower in time for Easter. Be sure that commercially case-cooled bulbs arrive & are planted by Nov 29, 2015. If you cool your own bulbs, start by Oct. 18 (23 weeks before Easter). Insurance lighting may be needed this year if you can't complete the full 6-weeks of bulb cooling before greenhouse forcing is scheduled to begin on week 17.

Insurance lighting: Apply insurance lighting if you know or suspect that bulbs have not received the entire 6 weeks of cooling before greenhouse forcing is scheduled to begin. Insurance lighting is night break lighting used to produce a long day photoperiod. When used immediately at shoot emergence it produces the same effect as bulb cooling or vernalization. Therefore, insurance lighting can be used to substitute for inadequate bulb cooling. Provide one day of insurance lighting for each day of lost cooling. Incandescent, fluorescent, LED or HID lighting in excess of 10 f.c. from 10 pm to 2 am daily will provide the necessary night break.

Fertigation: Start fertilizing with soluble formulation when lilies emerge and continue to within 7 days of sale. Combine calcium nitrate (3 parts) with potassium nitrate (2 parts) to make a 15-0-18 soluble fertilizer, or use a commercial 15-0-15 formulation. If phosphorus was not added to the medium, 20-10-20 can be used on an alternating basis with a 15-0-15. Fertilizer rates should range from 200-400 ppm. Do not allow medium EC to exceed 3-3.5 mS/cm based on a Saturated Media Extract. Stop fertilizing just before sale. Provide one clear watering before shipping to this will reduce salt levels and maximize shelf life. Do not withhold water or fertilizer to slow development. Do not over water (i.e. water too frequently) or root rot problems may occur.

Decrease Leaf Yellowing & Delay Flower Senescence: To prevent early-season leaf yellowing (7 to 10 days before visible bud) & mid-season leaf yellowing (7 to 10 days after visible bud) spray Fascination or Fresco at 10/10 ppm. Apply only to lower leaves & cover thoroughly to protect leaves from yellowing for up to 14 days. To prevent late-season leaf yellowing and post-harvest flower senescence, spray 100/100 ppm to thoroughly cover all foliage & buds. Apply when buds are 3 to 3 ½" long but not more than 14 days before shipping or cooling. Note: Avoid direct contact of spray to immature leaves during early- & mid-season applications unless you wish to induce stem stretching.

Disease and pest control: Before planting, clean bulbs of debris removing any scales showing evidence of infection or physical damage.

Once potted, root rots associated with Rhizoctonia, Fusarium, and Pythium are a concern. Drench immediately with Banrot, Pageant **Intrinsic**, or Empress **Intrinsic**, broad-spectrum fungicides, or you can treat to control these diseases separately by selecting from the fungicides specifically registered for Rhizoctonia, Fusarium and Pythium control on lily. Materials registered for Rhizoctonia and/or Fusarium include Cleary's 3336, OHP 6672 26GT, 26/36 and many generics such as Pageant **Intrinsic** and Contrast (Rhizoctonia), and Terraclor (Rhizoctonia). Materials registered for controlling Pythium include Alude, Banol, Subdue Maxx (beware of using mefenoxam exclusively because of widespread fungicide resistance issues with this active ingredient), Segway O, and Truban. Check with manufacturers regarding compatibility when tank mixing fungicides. Fungicides may need to be re-applied later in the crop, check labels for guidance. Preventative biological fungicides (RootShield, Rootshield Plus, CEASE, Actinovate, Mycostop, Companion and Triathlon BA) may be applied at planting for disease suppression and to enhance root growth. Check with company or product labels information for safe time intervals between application of biological agents and chemical fungicides.

Aphids, fungus gnats and bulb mites are a major concern. Many chemicals are listed for aphid control, including: Safari, Flagship, Tristar, Marathon and many generics, DuraGuard, Enstar AQ, Suffoil X, Insecticidal Soap, M- Pede, Kontos, Endeavor, Aria, Mainspring, Rycar and XXpire. Fungus gnats can be controlled with some of these same chemicals as well as Citation, Distance, Adept, Pylon, insect parasitic nematodes (Nemasys, NemaShield, Scanmask, Entonem) and Gnatrol WDG. Bulb mites, *Rhizoglyphus robini*, represent one of the more troublesome insect pests on lilies and effective management requires an integrated approach. Bulb mites are considered a secondary pest and are commonly associated with decay caused by fungus gnat damage and soil-borne fungal pathogens. The soil dwelling predatory mite, *Hypoaspis aculeifer*, may help suppress bulb mites. Note: Registration of pesticides varies by state so consult and follow labels for registered use. To avoid any potential phytotoxicity or residue problems, spot test before widespread use. No discrimination is intended for any products not listed.

Height Control: Monitor lily height regularly during forcing. If height exceeds the target size, run negative DIF or use a growth retardant such as A-Rest, Chlormequat E-Pro, Concise, Cycocel or Sumagic to slow stem elongation. If height is less than the target size, run positive DIF or use a gibberellin PRG such as Fascination or Fresco to increase stem elongation. Split applications of PGRs provide the best results. You can apply any of the PGRs at ½ to ¼ the normal rate (or even less) and use multiple applications as needed. Reduce the concentrations of Sumagic used when combined with DIF. Use DIF, or cool morning DIP, to control lily height. Equal day/night temperatures, high night/low day temperatures or a cool morning temperature dip will produce a DIF effect and keep lilies short.

Lily storage: Lilies can be stored for up to 14 days in the dark at 35-45F when buds turn white but before they open. Spray for Botrytis control prior to moving lilies to cold storage. Fungicides labeled for botrytis control include Veranda O, Phylon 27 and the biofungicide CEASE. Always follow label directions and test fungicides on a small group of lilies for damage to or residue on lily buds before using on the entire crop. Water Easter lilies thoroughly before starting cold storage. After removing from the cooler, place lilies in a shady location to avoid excessive wilting.

If you have problems contact your Extension Educators.

All agrichemical/pesticides listed are registered for suggested uses in accordance with federal and Connecticut state laws and regulations as of the date of printing. If the information does not agree with current labeling, follow the label instructions. The label is the law. Contact the Connecticut Department of Environmental Protection for current regulations. Where trade names are used for identification, no product endorsement is implied nor is discrimination intended.

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