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### *Forcing Recommendations for Easter 2012*

With Easter being a little earlier this year, we are proposing a normal forcing schedule for Easter, April 8, 2012. Last year Easter was really **too early**; this one is perfect. Plenty of time to still doing adequate rooting and a temperature dip for increased bud count. Weather permitting, **CTF bulbs will arrive October 17-26 and case cooled bulbs will arrive December 7-14**. This shipping schedule will give the normal number of greenhouse days, 110 days for CTF and 120 for Case Cooled.

- Last year I saw a number of crops with minor to significant mite damage. As you know, we have lost our main weapon (Kelthane). Research at the Easter Lily Research Foundation has shown that merely dipping bulbs in water for 30 minutes prior to potting actually reduces mite numbers. This affect is increased by adding Safer soap (or M-Pede soap, which is the same thing for cheaper) at a half percent rate or two quarts per 100 gallons. I strongly recommend this. It never hurts to add some fungicide to this dip as well since any future fungicides will be soil applied.
- **I would be remiss if I were to not discuss the need for fungicide drenches.** Last season with its long cool growing conditions demonstrated again the need to be very proactive with regards to root health. Lilies that are run too cold are susceptible to having weak roots. Although many of you have experience with the reduction or elimination of fungicide drenches, it should only be considered a bonus when you can. **You should always assume that your regular monitoring of your roots would result in an eventual fungicide in conjunction with adjusting your greenhouse environment** to minimize its cause and effects. If you're not into regular monitoring then you should apply fungicides on a monthly basis!!!! I believe in regular monthly applications since nearly all fungicides are preventative rather than cures. The bottom line is that a few cents saved per pot on fungicides can quickly become dollars lost. In addition, Root Shield, Soil Guard, and other biological root coatings have shown some promise for many growers particularly on light mixes. Terraclor may be very hard to find this year. If you need a substitute, try ParFlow or SyStar. Teraclor we hear will be available again next year, as it emerges from FIFRA.

Typical Fungicide Program

Dec.	4 oz. Terrachlor plus 8 oz. Of Truban / 100 gal.
Jan.	12 oz. Cleary's 3336 plus ½ oz. of Subdue / 100 gal.
Feb.	8 oz. Banrot / 100 gal
Mar.	12 oz. Cleary's 3336 plus ½ oz. Subdue / 100 gal.

- **CTF:** Following this schedule, CTF'ers will cool Nov. 8 thru Dec. 20 and have 110 greenhouse days and should get 14+ days of rooting. All of you know that we are firm believers in only two weeks of rooting, because longer rooting times seem to make the crop more uneven and the sprouting potential high. Please note that rooting temperatures at 65 degrees are recommended. This should promote rapid root development, high leaf counts, short internodes, and high flower counts.

- **CASE COOL:** This schedule will give you 120 greenhouse days, and is the schedule we will use on all the bulbs we cool here on the coast. If you pre-cool your own and receive them prior to Oct. 25, hold at 55 degrees until Oct 26 then cool.
- Start all precooling at 43-45 degrees and monitor your bulbs frequently for pin movement off the basal plate during the precooling stage. If rapid pin movement or sprouting occurs in the cooler, lower the temperature to 38 degrees for three days, then resume 42 degrees. Monitor your pin movement frequently and make the necessary temperature adjustments. Remember that when precooling we are really just forcing slowly and a controlled amount of pin movement is desirable. Constant 38 degrees usually stops all pin movement but can reduce leaf numbers. When applicable, add fluorescent lighting to help develop chlorophyll in the sprouted plants and stop stem elongation or move sprouted plants into a 45-degree greenhouse and finish your precooling hours there. Since more Poinsettias are shipped early, this is a particularly good option in cooler climates.
- Be careful not to get **too far ahead or behind**. Bear in mind that there is a lot of data as well as grower experiences that show that plants can have better plant form when started cool (60-63F degrees soil temp). It is most important though, to be on time by visible bud and leaf counting takes all the guesswork out. At the end of forcing, warm days and cool nights makes **very tall lilies**. By the same token if you are behind and unable to hold high night temperatures then you must warm during the day to make Easter and again you will have warm days/cool nights, consequently tall lilies. The best overall product is achieved when we are on time at our VB date and force “normally” to Easter.
- If you choose to (and you should!) temperature dip (50 degrees F. for 5-7days) at reproductive stage, you can increase bud count if you time it properly. To do this you must dissect plants or watch your stem roots. Normally, when the most advanced plants are just initiating stem root (small nodules on the stem) it is time to start to dip. When growers do miss their timing, they tend to miss late.
- The best stage to correct/adjust your timing is between reproductive (mid Jan.) and Visible Bud (Mar.5). This can only be accurately done when you count leaves. The few bucks it costs to do this will be out-weighed by the accurate use of fuel that counting leaves will make possible. More and more growers are assuming that they already know their leaf numbers and just use normal averages. **No one knows until they are counted**. You know lilies have a strange way of lulling us to sleep then throwing a major curve.
- We often under-feed lilies at the start of forcing. **This is particularly true when you run cool and don't water often**. To compensate, you need to make sure you are feeding heavy early. Most likely, we can expect to feed two or three times during December and January. Feed heavier the first two or three times to build up a good nutrition base for bud set towards the end of January. Feed at least 400-150-400 PPM during this period in soilless mixes by adding calcium and potassium nitrates to complete feeds. Acceptable nutrient tissue test standards as published by the University of Minnesota are:

Nitrogen (%)	2.4 - 4.0	Iron (PPM)	100 - 250
Phosphorus (%)	0.1 - 0.7	Manganese (PPM)	50 - 250
Potassium (%)	2.0 - 5.0	Zinc (PPM)	30 - 70
Calcium (%)	0.2 - 4.0	Copper (PPM)	5 - 25
Magnesium (%)	0.3 - 2.0	Boron (PPM)	20 - 50

- With fuel at the forefront, maybe it is time to rely a little more on chemical growth regulators rather than Dif. Whatever method of height control you use, implement it early to get results. A significant amount of stem elongation can be reduced if temperatures are lowered the first two to three hours of the day. This response increases as day length and daylight increase. Lower temperature ten- twenty degrees F. as close to first daylight as possible (resist the temptation to drop below 50 degrees F.). **This becomes more difficult the lower you run your night temperature, and is another real downside of low temperature forcing.** After two hours, let the temperature return to normal forcing temperature, allowing the pots to warm up slowly. At the other end, beware of high daytime temperatures in March and April that can result in positive Dif and increase stem elongation towards the end of the crop. Short days using blackout cloth is a very effective tool to reduce height by about 20%. Open blackout curtains one hour after sunrise and close one hour before sunset to eliminate far red at twilight.
- If you're not already using Accel or Fascination (Promolin and Fascination are the same) you really need to get some experience. All three contain both GA and BA but Accel is 1.8% BA and 0.18% GA whereas Fascination is 1.8% of both. Most of my experience has been with Fascination. This works so well on helping to control both late season leaf yellowing in the greenhouse as well as lower leaf yellowing in the storage/ shipping cooler. I have had lilies with over 5 weeks of cooling still not have yellow leaves when they were discarded a month later. Of course, 5 weeks is not recommended, but even if you don't store your lilies at all, the quality that the consumer receives through the store and into the home is exceptionally better not to mention your not having to strip yellow leaves at shipping. The proper time to apply is when you have enough height for differential placement. The plants have to be tall enough to spray the lower leaves without much contact to the actively growing upper leaves; this is usually 7-14 days after visible bud. A single Fascination basal spray of 35-50 ppm (1/4-1/3 oz/g water) once after visible bud will hold through the season and into the cooler. Some growers concerned about stretch potentially caused by these compounds are using Accel with the lower GA concentration. Some are even going so far as two applications, one near visible bud (5-10 ppm) for the late greenhouse phase and a second at shipping (25-50 ppm) for the storage/retail phase. The latter of these sprays is a whole plant spray, generally on carts, allowing drying time before being placed in the cooler.