

Dear Jolly Farmer customer:

Following is an article developed by Bernard Chodyla, the Belgian Mums Technical Advisor. He has authorized us to take these excerpts to share with you, in case you are experiencing any of the following symptoms. Let's face it, we've surely had rough weather this season and this has increased the challenges of growing an outdoor mum crop. Cool nights in June and extra-heavy rainfall in June and July have, in some cases, caused premature budding, yellowing leaves, or insufficient or unhealthy plant growth. This does not mean that pgr applications have been incorrect or imply poor growing skills; it's just part of growing outdoors and dealing with what comes our way. We hope the following information helps you achieve the most successful mum crop possible.

Most common problems at this time of year:

- **Premature budding on very early and early varieties.**

It is too late to trim small, budded plants unless you plan on placing them under lights and apply Florel to restart the vegetative growth. If plants are on the short side try to apply Fascination at 10ppm to promote more growth before first color.

- **Yellowing and discoloration of the entire plant, nutrient deficiencies.**

First check roots for signs of disease and measure the EC and pH. Plant yellowing could be a result of a poor root system, insufficient nutrient level (low EC) or very high pH causing certain nutrient deficiencies. If roots are healthy, apply a high rate of fertilizer to plants showing yellowing or any other type of deficiency, a single application of 500ppm nitrogen from 20:20:20 or 20:10:20 might be very helpful in bringing nutrients back to desirable levels. A very high pH, above 7, could result in iron deficiency. In this case the corrective application of chelated iron and gradually decreasing pH level is necessary. There is some confusion in regards to the optimum EC level, based on the sampling method; they should be as follows:

1:2 method: 0.7-1.2

Saturated extract: 1.5-2.5

Pour-through: 2.5-4.5

Squeeze method: 2.5-4.0

All values are in milliSiemens per centimeter (mS/cm)

- **Root and foliar diseases.**

Fungicide drench applied every 4-5 weeks can save you money in areas that are prone to flooding or excessive rainfall. Banrot or Subdue Max are very good and inexpensive choices in preventing Pythium. Cleary 3336 and Heritage are good choices for Rhizoctonia and some Fusarium control. Scouting on a regular basis will help you notice any signs of leafminers or thrip damage. Use preventative insecticide spray if your yellow sticky cards are showing too many insects. The best insurance policy against White Rust is healthy plant material and preventative fungicide sprays. For a full CWR management program check the USDA website.

- **Insufficient growth, plants too small for the pot size at this stage of the crop.**

In most cases this is due to insufficient fertilization in early growth stages. Belgian mums should receive constant feed of 300 ppm nitrogen from a phosphor rich fertilizers like 20:10:20 to promote the vegetative growth. Plants that are subject to nutrient deficiencies or wilt in early stages will finish short and show premature budding. During prolonged wet periods with excessive rainfall reapply 350-400ppm from 20:10:20 after each rain to keep sufficient nutrient levels. Belgian Mums[®] respond very well to high nutrition levels.

Question of the month:

My garden mums are small, budded and ready to bloom by the end of July, what is the best thing I could do now to make them saleable?

Answer: After talking to several growers in the North last month and getting recent weather reports from AccuWeather, I could tell this would be the major problem this season. Garden mums planted outside in June were exposed to cold nights and initiated flower buds too early. Above average rainfall in some areas exaggerated the problem even more, nutrients were leached and plants stopped growing. In anticipation of this problem I decided to experiment with one early variety that showed premature budding in early June (please see the picture below). The first plant on the left is a control, second received Florel 500ppm on June 25th, third was pinched and no PGRs, fourth was pinched and treated with Fascination 10ppm to resume the vegetative growth.

- Florel will not abort flower buds if sprayed too late
- Fascination 10ppm used as a spray will help to initiate more growth after trim
- Cutting back in case of premature budding is better than late Florel spray or no action at all if performed early enough.



The following picture was taken on July 8th; which plant would you rather have on that day?