

GROWERTALKS

Columns

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Young Voices: Ahhh, the Life of a Student

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"Ah, the life of a student," Pa said as the printer chugged out a stack of notes about grape culture and plant breeding. "Stay up late, wake up late ..."

It was coffee time on the farm: 9:00 a.m. I was barely awake after spending 12 hours on campus the day before. Even though less than half that time was in class and it was mostly sitting and listening, I was exhausted. This summer I had thrived on marching through acres of crops and hiking mountains. Switching to a more mental, sedentary lifestyle is a shock to my brain and body. Even my ride has gone from a '96 stick shift Golf full of gravel, greenhouse gunk, sticky cards and baggies full of soil to a new, prissy automatic car full of notebooks and ice scrapers, in anticipation of the harsh winter semester to come. Right now though, fall colors are blazing bright and cheerful and the weather is definitely not the notebook type.

My Fruit Crops professor wants us to wake up every morning and ask ourselves: Is this a good day for strawberry flower bud initiation? Here in Ontario, strawberries are treated as perennials and yield potential is established right now in the fall. It's all about temperature; strawberries are a cool-season crop, so day/night temperatures exceeding 78/71F (26/22C) cause flower bud initiation to stop.

So far, though, I've let my prof down. I've been relishing this warm fall and only making sweater-or-not decisions in the morning, not worrying about next year's strawberry crop.

Ah yes, the life of a horticulture student. We've been going on a tour of different fruit production operations every Thursday since the semester has started and it's been very interesting (and delicious).

As of this writing, Halloween isn't for a few weeks yet. But you could have fooled my Plant Pathology professor, who's been exposing goblins since day one. The plant world is not a green place full of light and life, but a dark shadowy nightmare full of death and destruction.

"There are more than a hundred thousand species of fungi on the planet," she says. "Ten thousand are known plant pathogens."

And that's just the known number, which is really just the tip of the plant pathology iceberg, she says.

I say, just like with the Titanic, that tip of the iceberg is quite enough to send my happy plant world crashing down. I'm already hiding under the lab bench quaking with fear for my plants' lives and we've only got as far as Deuteromycetes. You know fungi like *Colletotrichum* (anthracnoses), *Alternaria* (early blights), *Cercospora* (leaf blights), *Septoria* (leaf blotches); really, it's just the tippity-tip of that ginormous iceberg that will kill us all if we don't watch out.

The co-prof for Plant Pathology showed us a video where he illustrated plant pathogen infection cycles with clips from the old movie "Alien." That's where hiding under the lab bench quaking in fear became reality for me—especially after the gory scene where an alien emerges from his human host and disappears. The video ends and the good doctor says, "Just so you know, that alien comes back and eats them all later on." In my mind I could already see *Pythium* spores hungrily eying an innocent grower after emerging from a poor little plant ...

But, ah yes, the life of an agriculture student. Moving onto Soil Management class, where the scariest threat is "don't you dare call it DIRT!" Who knew that you can calculate the amount of carbon still remaining from a load of liquid swine manure you spread on the field months beforehand?

Or that applying urea can cause your "dirt" pH to go up?

Let me get all studenty on you for a moment: This is interesting stuff—as urea is hydrolyzed, it creates ammonium and HCO_3^- .

As my professor explained in the context of a wheat field, little lightbulbs started turning on in my horticulture-gear brain. Hydrogen carbonate (HCO_3^-) concentrations also show up on your irrigation water test reports. Your bedrock type (limestone in particular) can affect the levels found in your water.

Why is it important? It can raise your dirt pH and can buffer your acid injection. It gobbles those acid H^+ ions, producing water and carbon dioxide as a result. It will keep reacting with the acid until there's either no more of itself or no more acid—which is why, the higher concentration of HCO_3^- , the more acid you'll need to add before the pH will be adjusted to your target.

Because that reaction is not instantaneous—right after injection, your pH meter may read that your irrigation water is on target, but down the line those sneaky carbonates are treating that H^+ ion like Thanksgiving turkey.

Lecture over.

Ah yes, the life of a student. When the lecture is over, pens are put away and it's on to the next class, next topic. It's a good life, learning all sorts of things you really do love to learn. I'm one of the strange few 2017 OAC aggies that's focusing on the horticulture side of the Crops, Horticulture and Turfgrass degree offered in the Agriculture program at Guelph. A lot of what I'm learning in my classes now is targeted towards agronomy, but the science behind it is still plants, so I can apply it wherever I end up after graduation.

Ah, the life of a student with graduation approaching, anticipated and looming all at the same time. They ask what I want to be when I graduate, but, just like my education, the opportunities available are so broad it's hard to narrow it down to knowing exactly what I want to be doing full-time, with no up-coming semester to give a change in pace.

Ah, the life of a student. They tell me I will miss it. They say a year from now, once I'm graduated and have entered the real real-world, I'll wish I was back.

I'm not so sure. I'm looking forward to a time when thrills come in the form of hiking acres of horticultural crops (and mountains), not from getting handed an exam booklet so thick you can identify the tree species it came from. Luckily for me and my bank account, life as a student isn't permanent and promises bigger and better things.

Meanwhile ... ah, the life of a student is mine. **GT**

Sylvia Schaap is a fourth-year horticulture/agriculture student at the University of Guelph in Ontario, Canada. She also occasionally works in the family greenhouse while looking at plant diseases under the microscope, writing papers on breeding grapes, making posters on the effect of silicon on fruit production and quality, and calculating crop irrigation requirements.