It is that time of year again, when there is a hint of seasonal change in the air and the campus is filled with students. I enjoy fall and the return of the students. They bring life to the place, ready to change the world with enthusiasm and hope. I for one am thankful for the return of the students (even if there is no place to park and the Tim’s line is outrageous). Their energy always causes me to reconsider my situation, to look at things with a brighter view and to remind myself that 1) things are not that bad and 2) students look to us, as teachers, to engage and inspire them, and that is a privileged opportunity.

Plant Agriculture is not typically recognized for the teaching we do. Our department is known for research intensity and excellence, but I think we are not sufficiently recognized for the tremendous amount of teaching that we do. We maintain three full majors, and teach into another half dozen programs. We cover an extraordinarily broad range of courses at all sorts of levels from the very applied to the esoteric, and everything in between. We are known for our excellent research-based graduate education (and we welcome this fall a new cohort of excellent graduate students) but we can also be proud of the role we played in causing OAC undergraduate program enrollments to rise by 9% over last year and the fact that our teaching contact hours at the undergraduate level are up as well. And the graduate, undergraduate and diploma program-based teaching only represents part of the teaching we do. Our department has always been exceedingly engaged in extension and training for industry, industry groups, farmers and farm organizations. To our partners we represent “University” in the truest sense of the word and they value our teaching greatly. Our role in teaching is broad and fully integrated with our research programs. And our teaching role will be expanding into new areas this coming year including biomaterials science, laboratory bootcamps and, urban and community based agriculture.

So let’s welcome the new students on campus this fall, mindful of what we can do for them, and to all in Plant Agriculture who are involved in teaching (which is essentially everyone), thank you.
To all our new graduate students a warm welcome, we hope you find your time in Plant Agriculture to be rewarding and a lot of fun too!!

I am Glenn Alejar and I come from the Philippines, where agriculture is very much a big part of life for countless people. I graduated with a BSc in Biology (majoring in Genetics) at the University of the Philippines, Los Baños and worked as a researcher at two research institutions in the Philippines, the most recent being the International Rice Research Institute (IRRI). It was here in IRRI that I first got to participate fully in a research environment, being exposed not only to the plant breeding side but also to crop production as a whole.

It was the constant search for knowledge and ways to apply that knowledge for practical purposes (and yes, a lot of good luck too) that led me here to the University of Guelph. I am currently working on trying to find QTLs for cabbage seedpod weevil resistance in canola, under the guidance of Drs. Laima Kott, Istvan Rajcan and Peter Pauls.

Along with taking my MSc, I am also busy raising my 4-month-old baby daughter, who is proving to be quite a (cute) handful for me and my wife. If she does let me have some free time, I spend it listening to music or being online, finding more ways to tweak my computer, etc.

I am truly fortunate to have the chance to study and live here in Guelph and I look forward to seeing more of this place (and hopefully the rest of Canada), meeting new friends and colleagues and learning more here.
Being born second last in a large Irish family of six kids has it’s advantages, namely that you have lots of hand me downs, and lots of people to fight with, and play the wonderful sport of hurling. That said my loving family did also bring back many tales of journeys to foreign lands, each of which intrigued. My journey into the field of university research has been one smattered with life experience. Having left Ireland at age eighteen, traveling and exploring has always been in my blood. University in Britain was exciting, my university internship in the United States of America was eye opening to say the least. Seeing the inner workings of golf course maintenance was in itself, both, science, art and hard work. On finishing university in Britain and on the advice of a mentor I began working in the hectic field of golf course construction. Luckily working in construction and maintenance of golf courses allows one the luxury of traveling. After working a few years in Ireland, I headed to Japan and worked just north of Tokyo, this experience was the beginning of my fondness for Asia. On traveling to Australia I got to live out a childhood fantasy of driving heavy earth moving equipment everyday, an excavator to be exact. On meeting a lovely Canadian girl in New Zealand I chased her halfway around the world and back again, but it was the best move I ever made.

Having traveled back to England in August 2006 to complete a M.Sc in Sports surface technology at Cranfield University. The research section of my thesis project was completed in the Bovey greenhouses under the careful tutelage of Dr. Eric Lyons. My thesis focused on the effect of frequency and rate of irrigation applications on the growth of Bryum argenteum moss within a turfgrass sward. This research provided a poster at the recent “Plant and Soils” conference at McGill University in Montreal. Hopefully in the near future a scientific paper can also be published from the research. My current research will be access the effects a variety of irrigation wastewaters may have on plant and soil properties. Dr. Katerina Jordan and Dr. Eric Lyons are overseeing this project, with funding kindly provided by the OTRF and OMAFRA. I am looking forward to another large dumping of snow this winter just like last winter (doesn’t snow much in Ireland), fingers crossed. Guelph is a gem of a town and this University is a cracker, and I am enjoying getting to know them both. Slán agus tóg go bog é (Bye and take it easy). Darra
I’ve been enrolled as a PhD student with Liz Lee since September 2005 working on maize genetics and carotenoid accumulation. I’ve had a great time so far in this department and in Guelph, experiencing many firsts in both my studies and personal life: my first field season; my first physiology harvest; my first car; my first vegetable garden; my first child; my first 18 months of sleep deprivation, which I topped off with my first (and thankfully only) comprehensive exam. Since starting in 2005 I had also been, for the first time, volunteering off and on with our departments graduate student organization, the GSLC. So this spring I made the leap and volunteered to be the PhD rep for the GSLC.

During my time here I’ve seen Dan MacLean and Brae Surgeoner, Jamie Larsen and David van Dam, and Eric Page and Liz Brauer all do an excellent job as GSLC reps. I know we have big shoes to fill, but I know that Siobhan Moore and I are up to the challenge. The GSLC, a fairly organic committee, has shifting priorities with every new set of chairs. My focus is towards creating more of a community feeling in our graduate student cohort. We will continue holding semi-regularly scheduled potluck dinners and are trying to organize some local trips and tours, including brewery and farm tours. Look for announcements. Another priority for me is the “mock-prehensive” exam group: a group of PhD candidates in the department is set to put new PhD students through their paces in support of their qualifying exam preparations. Siobhan and I are also working hard on the retreat planning committee in hopes that, in 2009, we can meet the expectations set by the first departmental retreat. Finally, I would be remiss to not mention the departmental calendar: the beautiful fruit of the labours of Liz Brauer and Eric Page, with much assistance by Mark Munro of the Graphics Studio, and funded thanks to the support of the Student Life Enhancement Fund and our department. The calendar was previewed at our grad student orientation barbecue, and is for sale, $10 – please see Liz, Eric, Siobhan or me. The proceeds of calendar sales will go towards future GSLC events.

I look forward to the next several months, continuing to working on my thesis research, continuing to participate in the department, interacting with all of you, and getting some stuff published! Please feel free to get in touch with me if you have any questions or concerns that the GSLC can help you with.
Weidong Liu, PhD, Jan. 21, 2008.  
Physiological Mechanisms Underlying  
Heterosis for Stress Tolerance in Maize  
Dr. Thijs Tollenaar, advisor

Sarah Stephenson, MSc, Jan. 29, 2008.  
Quality and shelf-life of Ontario greenhouse tomatoes exposed to 1-Methylcyclopropene  
Dr. D.P. Murr, advisor

Allan Kaastra, MSc, Feb. 22, 2008.  
Performance interactions among HPPD-inhibiting and ALS-inhibiting herbicides for control of annual grasses.  
Dr. Clarence Swanton, Dr. Peter Sikkema, advisors

Daryl Vermey, MSc, April 10, 2008.  
Interactions between nitrogen and velvetleaf densities on glufosinate and glyphosate efficacy  
D.E. Robinson, C.J. Swanton, advisors

Lynette Brown, MSc, April 11, 2008.  
Cumulative herbicide stress in corn and soybean  
P.H. Sikkema, D.E. Robinson, advisors

David van Dam, MSc, April 16, 2008.  
An analysis of phenotypic variation and the critical period for weed control in barley (Hordeum vulgare L.).  Advisor Dr. Clarence Swanton, advisor

Travis Coleman, MSc, April 23, 2008.  
Environment-Specific Quantitative Trait Loci for Grain Yield in a Novel Recombinant Inbred Line Population.  
Dr. Elizabeth Lee, Dr. Matthijs Tollenaar, advisors

Renuka Subasinghe, MSc, May 9, 2008.  
Control of fusarium stem and root rot in greenhouse cucumber (cucumis sativus L.) through genetic tolerance and early detection  
Dr. Barry Micallef (Advisor) Dr. Bernard Grodzinski (Co-advisor)

Renee Cloutier, PhD, May 21, 2008.  
Photosynthesis, export and partitioning in source leaves of Snapdragon (Antirrhinum majus L.): An investigation of carbon fluxes  
B. Grodzinski, advisor

Scott Liddycoat, MSc, June 13, 2008.  
The effects of plant growth promoting rhizobacteria on Asparagus officinalis subjected to water stress and disease.  
Dr. D.J. Wolyn, advisor

Mahsa Golbabaie, June 19, 2008.  
Characterization of Ontario Crop Fibers for Use in Biocomposites (Wheat and Soybean)  
Dr. Larry Erickson

The detection of biochemical markers for cabbage seedpod weevil (Ceutorhynchus obstrictus) resistance in Brassica napus L. X Sinapis alba germplasm.  Dr. Laima Kott, advisor

Jason McCallum, August 21, 2008 PhD.  
Phytochemical and molecular characterization of factors influencing anthocyanin biosynthesis in grape (Vitis).  Dr. Judy Strommer, advisor
In this issue we highlight the personnel working at the Simcoe Research Station and the research that is being undertaken there. I hope you enjoy getting to know a little more about what is happening at one of our satellite locations.

The Simcoe Campus of the University of Guelph, Department of Plant Agriculture has 86.8 hectares of land on the edge of the highly productive Norfolk sand plain in the central Erie region. It is located about 10km north of Lake Erie and 2km east of Simcoe. Its mission is to help strengthen the fruit and vegetable industries in the potentially highly productive zone along the north shore of Lake Erie. Plant Agriculture operates five research programs covering vegetables, fruits, and various alternative crops for the sandy tobacco soils of the area. The ratio of research input is about 70% vegetables and 30% fruit, which reflects the approximate distribution of horticultural production in the Lake Erie counties. Four faculty (John Cline, Adam Dale, Alan McKeown and John O'Sullivan) and their teams work there, and Dave Wolyn’s asparagus breeding program maintains all their research plots on the station.

Judy Kelly — Administrative Assistant

I started out at an early age as a hairdresser in my home while I raised our 4 children, then returned to high school and graduated grade twelve with honors with two of our sons. I am now a regular part-time admin assist with the Univ. of Guelph, working every morning. I am also a part-time CSR with the OMAFRA office on site so work some afternoons there. I reside in Cayuga with husband Bob of 43 years who is a long distance trucker (explains the 43 years). I keep busy with 4 grown children and their families, which includes 11 grandchildren. I have suggested an even dozen but have been given 8 emphatic NO’s. My likes are most sports, all music, reading, crosswords, and my favorite is having all 19 of our kids, home for vacation at the same time. My dislikes are working part-time, hot summer days, controlling people, and losing friends too early. My pet peeve is to be in the station golf tournament and not being able to hit the ball. My goal is to retire in the not so far away future and spend a lot of time travelling with all of the grandkids before they get too old.
I was raised on a Market Garden near Millgrove Ontario, where my parents grew a wide range of vegetable crops and fruit. It would take quite list to cover the crops we grew or tried at times. Thus, I have had a wide range of experience with a large number of crops from land preparation, planting through direct sales. While we grew most of the major vegetables grown today, we did grow a number such as broccoli and Chinese vegetables that have become common in recent years. All of our produce was sold on the Hamilton Farmers market. This market is now located under the Public Library in downtown Hamilton, but has gone through many changes over the years from open sheds to open air to a car-park to the existing structure. One thing with direct sales, you soon learned what the customers wanted and shifted varieties and even new crops. So the ‘new’ crop concept is not new, it was in the farm market and direct sales component of the Industry for years. I think it was the weeding and hand harvesting that sent me down the path I took. Those who have not tried to keep sweet corn for instance, free of weeds, in a hot damp summer with no herbicides and too wet to cultivate will never appreciate the effects of herbicides on vegetables. Picking potato beetles and putting them into a tin can with a bit of gasoline was insect control years ago. So much for non chemical control! Picking vegetables under all conditions wasn’t the most fun either. Consequently, I developed an intense interest in the plants, production systems and crop management.

I suppose it was inevitable that I went to Guelph, and the OAC and Horticulture. I received my B.Sc. (Agr) in 1976, Horticulture major, fruit and vegetable sciences, MSc. in 1978 on post harvest storage of vegetables; both from the University of Guelph and PhD on growth regulators from Michigan State University in 1982. My main interest is application of the sciences to improve the production systems in field vegetables, or Integrated Crop Management (ICM) which tries to take into account all production practices. For example, nitrogen nutritional status or form of nitrogen can affect the disease status of the plant, visual and nutritional quality of the crop. Work on ICM also opens doors and opportunities for cooperative projects, e.g. on diseases, which adds to the fun, challenges and science.

Production systems and markets have changed considerably in my time from limited pest and weed control (cultivator, hand pulling, and hoes), storage and handling systems to our modern systems. Vegetables and fruit shipped in from California and Florida after the 1970’s and consumer buying in chain stores changed things in Ontario drastically. One thing that disappeared was overwintering vegetables such as spinach, green onions, and parsnips for early spring sales. It is interesting to see
a resurgence of farmers markets now after a period of decline in the past 30 years. We have gone a full circle in markets with the resurgence of farm markets, 100 mile diet etc. One also has to wonder about the effects of rising oil prices and what opportunities will develop. Another factor is the increasing diversification of Ontario’s demographic and ethnic makeup, which creates specialty markets or “new” vegetables or markets. Consumption of fruits and vegetables for health reasons adds to demand. These will create opportunities for Ontario growers, consumers and for research. Since there may be 100-200 vegetable crops we could grow here and perhaps more as our population diversifies, there is considerable need and scope for research on vegetables.

Given the large number of vegetables grown in Ontario, spring, summer, winter storage crops and ability to double crop several species it’s not surprising that there are many gaps in our knowledge of the systems here. One gap is crop nutrition. Low nitrogen rates can increase disease pressure and some physiological problems, while excess can lead to increased disease, other physiological disorders, ground water nitrogen contamination, extra greenhouse gasses, and costs to growers and might affect human nutritional content. Thus, N management in vegetables is highly complex. We still do not have rate, timing, source of nitrogen worked out for Ontario conditions for yield for many vegetables, never mind the newer ones and other aspects. Weather affects nutrient management here considerably. Our recent work has shown that there is a long way to go to improve nitrogen management of vegetables in Ontario. Nitrogen nutrition may be the defining issues of vegetable nutrition in the 21st Century.

Myself, Drs Jon Warland (Land Resource Science) and Mary Ruth McDonald have been investigating climate effects on yields of vegetable crops in Ontario. Marketable yields of certain annual cool season vegetables increased from 1940 to the mid-1980s then became highly variable. Yield of several Brassica vegetables declined an average of 10% for every 10d >30°C. Tracking yields may provide an indicator of a changing climate. We are going to have a problem in keeping high yields of cool season vegetables as the climate warms.

We humans are entering a new era due to climate change. We are going beyond the boundaries of the development of all our agricultural crops, systems etc., with increasing heat, variability and carbon dioxide. When you consider according to the UN that world food production has to double by 2030, without adding to habitat destruction etc., on top of everything else, do we ever have a challenge! We may well have to completely review and renew all of our production systems to meet these changes. There are considerable opportunities for research, both applied and basic, but even more so for collaborative study.
The focus of the berry crop research program, supervised by Adam Dale, is to provide research to expand and increase the viability of the berry crop industry in Ontario. This program was originally centred in Vineland and was moved to Simcoe in 1983. Its main thrusts are strawberry breeding and production research to extend the harvest season of berries. The program is ably supported by two technicians, Dragan Galic and Cathy Bakker, both Plant Agriculture graduates.

Over the years, a steady stream of new June-bearing strawberry cultivars have been released. One of our earlier cultivars, Governor Simcoe became standard for fruit quality and is still grown by some growers. Recently, Sapphire was released in 2002, Serenity in 2003, V151 last year, and R14 will be released this coming spring. Both Sapphire and Serenity have found their place in the industry.

Ontario is a large province and has a wide range of climates, so one of the challenges when breeding a perennial crop is to incorporate sufficient winter hardiness. To accomplish this, we have been breeding winter hardy strawberries with Becky Hughes at the New Liskeard Agricultural Research Station. The basis of the winter hardiness used was wild *Fragaria virginiana* from Alaska which had been incorporated into several hardy varieties developed in Alberta. We have one selection, now being trialed throughout the Province.

The cultivar mix in Ontario is changing rapidly as the growers move to dayneutral (everbearing) cultivars so that they can harvest strawberries all summer. Consequently our breeding program has moved towards dayneutrals; a much more difficult challenge as high yield comes with reduced runner production, the traditional way to propagate strawberries.

Also, tarnished plant bugs love dayneutral strawberries and can make every berry unmarketable. Working with Rebecca Hallett in Environmental Biology, we have been able to identify resistance to the plant bugs in *Fragaria virginiana*, which we are incorporating into our germplasm. Cindy Rougoor has been working with tarnished plant bugs on her M.Sc. She has been able to ascertain that the resistance is stable across environments and has devised bioassays to quantify the resistance.

Ontario has a continental climate, so strawberries can only fruit through the summer months. To compete with imports from California, we have joined forces with Craig Chandler, the strawberry breeder in the University of Florida, to develop dayneutrals which will be adapted to both Ontario and Florida. Since Florida produces from November to early April, we should be able to develop cultivars which, with some adaptation of the cultural systems, can provide fruit from Ontario and Florida year-round.

However, we have not forgotten June-bearing strawberries. Our growers have for years
told us that they need ‘Roundup-ready’ strawberries. So in 2000, we started to look for glyphosate resistance. We were able to find several *Fragaria virginiana* clones that survived glyphosate applications and are now third round of crosses to incorporate glyphosate resistance into strawberries with good horticultural traits. As far as we know, we are one of very few breeding programs in the world incorporating glyphosate resistance without using GMOs; a subject for discussion over coffee, maybe.

To use dayneutral strawberries most effectively, needs a complete overhaul of the strawberry production systems. So we have a large project ongoing to look at various production systems throughout the Ontario and beyond. We have strawberries in high tunnels at the Cedar Springs Research Station, with John Zandstra’s team from the Ridgetown Campus, plastic mulch and spacing trials at Cedar Springs and with Becky Hughes in New Liskeard, plug production systems and inbreds at Simcoe and in Florida, and variety trials in Manitoba.

Over the last fifteen years, we have been developing production systems to grow raspberries year-round in the greenhouse. Out of this, questions have arisen about the mechanism of flower bud initiation in raspberries. Conventional wisdom, has classified raspberries as two flowering types: summer-bearing and fall-fruiting. Research we have been doing with Pedro Oliviera at the Estacao Agronomia National in Portugal suggests that these two flowering types may be the expression of what is a continuous genetic trait.

Recently, we have been expanding our breeding program into nut trees and are now working on two crops: chestnuts and hazelnuts. We’ve been working on chestnuts for six years now and are just starting to get some results. Hazelnuts are a new venture started this year.

Chestnuts used to be a dominant tree in the Carolinian forests of North America until 99.9% of them were wiped out by chestnut blight in the mid 1900’s. We have been working with the Canadian Chestnut Council to develop Canadian blight resistant trees to reintroduce the species into southern Ontario. Our first generation trees are now at two sites in southern Ontario, Riverbend Farms near Aylmer and Tim Horton Foundation camp at St George. This year we have been busy inoculating the trees with the blight fungus with Greg Boland’s team from Environmental Biology.

Our new Hazelnut adventure, started out because the hazelnut candy maker, Ferrero, built a new manufacturing plant in Brantford. This became the impetus for an initiative to produce the nuts in Ontario. Ferrero imports over 6000 tonnes of nuts annually and we project that we would need over 12,000 acres of hazelnuts to supply that quantity of nuts. This is a very large acreage for a horticultural crop, so has generated a lot of excitement.

However, to start with, we need cultivars that are resistant to Eastern Filbert Blight and will crop consistently. As these are few and far between, we have started simply, and with Alan McKeown’s help planted our first cultivar trial this year.

Being part of a ‘small fruit and nut’ team is rather like a Cadbury’s chocolate bar, satisfying and fun. We’ve got the fruit and nuts. So maybe we need to think about breeding a winter hardy cocoa plant. Now, that would be a challenge.
Dr. John Cline is an Associate Professor in the Department of Plant Agriculture, University of Guelph where he conducts tree fruit physiology research on apples and peaches in Simcoe.

John’s connection with agriculture started at a young age when he was exposed to horticulture on a small fruit farm in Grimsby, Ontario, and later, helping to establish a commercial orchard in rural Owen Sound, Ontario. At a young age John recalls accompanying his father to the Horticultural Research Institute of Ontario (Vineland) where his father conducted research in plant nutrition. Many trips were also made as a child to his grandparents’ dairy farm near Hickson (Oxford County). These combined early impressions and interest in agriculture led John to enrol in the BSc (Agr) programme at the University of Guelph in 1983. He spent summers working with the soil survey unit at the Guelph Agriculture Centre, and later with Dr. Eric Beauchamp, University of Guelph. After completing his BSc in 1987, majoring in soil science, John pursued a MSc in Horticulture at Michigan State University followed by a Ph.D in Horticulture at the University of London, Wye College, UK. His research on rain-induced cracking of sweet cherries, was conducted at East Malling Research Station, 60 km south east of London, with projects in Ullensvang, Norway and Blenheim, New Zealand.

After completing his Ph.D, John began a career focusing on apple research (90%) and extension (10%) at the Horticultural Experiment Station, Simcoe in 1994. Since transferring to the Department of Plant Agriculture in 1997, his research responsibilities have broadened to include other tree fruit species including peaches, cherries and plums. The primary objective of his research is to advance the understanding of the physiological processes influencing tree growth, flowering, fruit productivity and fruit quality. With the assistance of Debbie Norton, Agricultural Technician stationed in Vineland, this research is conducted at research orchards and labs in Simcoe (75%) and Vineland (25%). Projects involve several aspects of tree fruit production, with focus on the benefits of trickle irrigation and irrigation scheduling, use of plant bioregulators for crop load management and

Cooperative research projects with the AAFC and the USDA have led the identification of new apple cultivars such as Crimson Crisp (above) and many others which may be well suited for Ontario’s unique climate and soil.

Highlight on Simcoe
flowering, rootstock and scion interactions and their effect on dwarfing and precocity, orchard planting and training systems, soil management and plant nutrition. We are also interested in understanding the physiological basis for rain-Induced cracking of sweet cherries, as well as studying the benefits of organic mulches in the orchard coupled with the fate of nitrates in the groundwater.

John is currently co-teaching HORT*4420 - Fruit Production, and co-supervising Ph.D candidate Ali Taheri. He is also involved in co-supervising the first incumbent of the Walter and Laura Scott Graduate Research Assistant, scheduled to start this autumn. John is a member of the Department’s Executive Committee and is providing project leadership for a competitive OMAFRA project entitled “Innovative Research to Contribute to the Prosperity and Sustainability of the Tree Fruit Industry.” John interacts with industry organizations including the Apple Growers of Ontario, the Ontario Tender Fruit Producers’ Marketing Board and the Niagara Peninsula Fruit and Vegetable Growers’ Association and is a member of several scientific societies including the Canadian and American Societies for Horticultural Science. His programme is funded, in part, by these industry organizations as well as OMAFRA, NSERC, and IRAP. John has published over 42 research papers, 67 conference papers, 47 technical reports, multiple internet articles, 115 popular press articles and made over 85 scientific/extension presentations for grower organizations.

John is married to Michelle (OVC’88) a veterinarian practicing in Grimsby, has three children, and resides in the Niagara Peninsula (Grimsby). John can be reached in Simcoe at (519) 426-7127 ext 331 or by email at jcline@uoguelph.ca. Further details about his research, teaching, outreach programme can be found at http://www.plant.uoguelph.ca/treefruit/.
Weed management research screens new herbicides and develops registrations of new weed control products for the vegetable industry, leading to the development of cost effective, modern, highly selective, weed control products. This ensures efficient control of weeds without harming other components of the ecosystem and integrates new herbicide use with current control methods. Studies emphasize integrated weed management that effectively control weeds for a wide range of vegetable crops. The registration of new weed control products is of great significance to the vegetable industry since it provides a less expensive option for weed management. It reduces the need for labor for hand-hoeing and weeding, reduces the cost of production and provides more cost effective weed control, resulting in an economic benefit to the grower. This improves the long-term competitive position of this industry. The weed management program, developed over the past 30 years, has enabled growers to exploit new production practices with many vegetables. This program has played a major role in developing the data needed to support herbicide registrations and ultimately in making commercial recommendations to growers. A large number of new herbicide registrations have been obtained for the vegetable industry.

Studies on a stale-seedbed system of production improves weed management options resulting in improved weed management with minimal herbicide input. Studies with new herbicide chemistry identify varietal tolerance for major vegetable crops. Knowledge of potential rotation problems due to persistent herbicide soil residues help vegetable growers to make intelligent and cost-effective crop rotation decisions. A grower-friendly greenhouse bioassay to detect residue levels in the soil, in land destined for vegetable production, was developed. A plant bioassay is a simple, inexpensive, accurate and direct method to determine if it is safe to grow sensitive crops in soil treated with known herbicides or on soils with an unknown history of herbicide use. This will prevent costly crop damage and allow greater rotation flexibility.

The Simcoe Research Station is certified by the Standards Council of Canada as a Good Laboratory Practices (GLP) compliant facility. GLP compliance involves having equipment (sprayers, balances, freezers, thermometers, etc.) calibrated to a national standard and obtaining certification following a series of audits of Standard Operating Procedures. The Research Station is now able to generate data for pesticide registration that is acceptable to the Pest Management Regulatory Agency (PMRA) of the Federal Government. Minor Use Pesticide Residue Trials are conducted on a variety of crops with the objective to get registrations that provide growers with new reduced-risk and environmentally friendly pest management options. GLP certification for the Simcoe Research Station allows participation in Agriculture and Agri-Food Canada’s Minor-Use Program and in International (US, IR-4) studies on pesticide efficacy, crop safety and residue studies. This research provides a means to obtain effective weed management tools through the User Requests Minor Use Label Expansion (URMULE) program of the Federal Government. Based on these results, product performance data on crop safety and efficacy on the best herbicide treatment combinations are provided to the AAFC Pest Management Centre to support URMULE submissions to the PMRA. These products get recommended in OMAFRA Publication 75 “Guide to Weed Control” and are available for use by growers.
Studies in vegetable physiology include variety trials on cucumber, melons, peppers and beets. Research that maintains the vegetable industry in Ontario in a competitive position by developing high-yielding, disease-resistant/tolerant cultivars with superior quality, adaptability to Ontario growing conditions and market acceptance is important. It enhances the competitiveness of the vegetable industry and is essential to the continued success of the industry. Dramatic improvements in cucumber quality, yield and disease resistance have resulted from extensive testing. The crop management system used in the production of this high value, expanding crop is based on research conducted at the Simcoe Research Station. Research has also been directed at expanding the production of peppers. This crop has seen a dynamic increase in value in recent years and the central Erie counties have good potential for further expansion of the crop to replace imports.

Studies on crop management practices that are cost effective, sustainable, produce maximum yields at minimum production costs increase the competitiveness of the vegetable industry. This research helps Ontario’s vegetable industry to not only maintain its competitiveness but expand production to capture export markets. Reduced-tillage studies produce higher yields than conventional production while conserving soil moisture, protecting soil structure and reducing soil erosion. This research will provide fundamental knowledge and tools to contribute to sustainable vegetable production. Cropping practices used for vegetable production have relied on intensive use of tillage. The adverse effect of excessive tillage practices on soil structure, erosion and nutrient leaching have been well documented. Soil structural, organic matter breakdown and nutrient leaching problems will continue to plague the vegetable industry unless tillage conservation techniques are adopted. Conservation tillage systems need to be implemented in vegetable production systems to address these concerns.

Diseases can have a devastating impact on vegetable crop production, reducing the industry’s profitability and competitiveness. Several new, potentially devastating diseases are on the increase, including Phytophthora and Downy Mildew of cucumbers. Recently a multi-disciplinary research project was initiated with a vegetable pathologist and other pest management specialists to help meet the industries need for more and better ways of controlling Downy Mildew of cucumbers. This research will provide growers with the information they need to explore environmentally friendly pest management practices and will lead to improved standards for food safety and environmental stewardship. There is a need for increased collaboration across disciplines to integrate research from basic to applied and to ensure technology is developed, adapted and transmitted as fully and as quickly as possible for commercial use. The Simcoe Research Station is central to developing these new technologies. This research is supported by a number of grower organizations and the agri-food industry, including the Ontario Processing Vegetable Growers, Ontario Fruit and Vegetable Growers Association, Fresh Vegetable Growers of Ontario, Ag Chemical industry, J. M. Smucker, OMAFRA, and Agriculture and Agri-Food Canada.
John O’Sullivan

John has been a fixture at the Simcoe Research Station for 34 years. During this time he has seen the name and organization of the research station change, but his research focus has always been that of Weed Management and Vegetable Production.

John received his B.Agr.Sc. (Horticulture) and M.Ag.Sc (plant physiology) degrees from University College, Dublin and his Ph.D. at the University of Wisconsin. In 1974 he accepted a position as a Research Scientist at what was then called the Horticultural Research Institute of Ontario (HRIO), Simcoe Station. In 1986, he became director of the research station, a position he maintained for five years. In 1998 HRIO amalgamated with the University at which point John was transferred to Associate Professor status within the Department of Plant Agriculture. In 2000, he was appointed Director of the OMAFRA/University of Guelph’s Plant Research Program and remained in this position for seven years while still managing the weed management program in Simcoe. During this time, he also became the Directorship of the BioProducts Research Program. At the end of 2007, John announced his retirement; however he is still managing the program in Simcoe in order to make a smooth transition for his successor, Rene Van Acker.

You can guarantee that John will have at least one funny joke at hand. He is very proud of his Irish heritage… just ask him about it over a pint of Guinness. Perhaps the next best thing John enjoys after a good laugh is hitting the greens for a good game of golf. He has been happily married for 38 years to Mary and has four children, Caitriona, Brendan, Kieran and Deirdre.

Robert Grohs

Robert has been employed as a Research Technician within the Weed Management and Vegetable Production research program for the past eight years. During this time, he has also taken on the responsibility of being the station’s Information Technology (IT) Technician.

Robert grew up on his parent’s tobacco farm in Norfolk county. With this experience it made sense that he would end up in a career related to agriculture. Prior to his present position, Robert was a technician based at the AAFC Delhi Research Station in which his work was focused on ginseng disease management and herbicide research.

He has been happily married to his wife Jennifer for the past 18 years. They have two children, Alida (12) and Matthew (10).

When work is finished Robert enjoys golf, minor hockey and being a local Lion’s club member.
Rachel Riddle

Being brought up on her parent’s small dairy farm located in Norfolk, Rachel gained an appreciation for agriculture at a young age. However, this did not convince her to pursue an education in agriculture. She completed her B.Sc. at the University of Toronto, majoring in biology and zoology. Upon graduation she accepted a position with the University of Guelph, at Simcoe in the berry breeding program. This position brought Rachel back to her agriculture roots. In 2004 she moved over to her current position working with John O’Sullivan and Robert Grohs in the Weed Management and Vegetable Production research program. On top of this, she started graduate studies (M.Sc., part-time) under the supervision of John O’Sullivan and Clarence Swanton. Her research project is on the impact of growing vegetable crops one year after the application of a corn herbicide called Callisto.

Rachel is happily married to her husband Greg (it will be one year at the end of September). In her spare time, she enjoys running, hiking, and rowing.
In 1982, Dr Don Elfving and I started a small collection of the native Carolinian tree species found in Norfolk County. The intent was to have examples of the rarer species for preservation in a location where they can be seen. These trees are planted to the east and south of the office building. The initial planting consisted of Black walnut *Juglans nigra*; Blue ash, *Fraxinus quadrangulata*; Cherry birch *Betula lenta*; Hop tree *Ptelea trifoliata*; Kentucky coffee tree *Gymnocladus dioicus*; PawPaw *Asimina triloba*; Tulip *Liriodendron tulipifera*; Ohio Buckeye *Aesculus glabra*; Redbud *Cercis canadensis*; and Tupelo *Nyssa sylvatica*.

Since then we have added a Cucumber tree *Magnolia accuminata* dedicated to the Centenary of OMAFRA in 1988; Flowering Dogwood *Cornus florida*, and Butternut *Juglans cinerea*. There is a native chestnut *Casteana dentata* growing on the site in the area of the collection. A local Horticultural Society, District 6 of the Ontario Horticultural Association donated a Sweet gum *Liquidambar styraciflua*, which is planted on the north of the office building. The east parking lot is surrounded by Redbuds and is now spectacular in the spring.
On this and the next few pages are pictures of some of the unique and beautiful trees that enhance the landscape at the Simcoe Station.
I don’t know how I allow myself to get talked into these things. One, I hate writing, I love reading - books, magazines, newspapers, cereal boxes. Two, I hate writing about myself, I’m just not that interesting. Three, do I write a personal or professional article or can I find a good mix of the two.

Born in Palmerston, Ontario to immigrant parents Jean spent the first 20 years of her life in Drayton, Ontario surrounded by dairy and chicken farmers. Jean is the oldest child of eight siblings and enjoys family gatherings with her extended family, especially her four sisters. Jean is the proud mother of three children, Cheryl (Eric), Alisa (Tim) and Jared. She is very happy that all of her children were awarded their first post-secondary degree from the University of Guelph. Cheryl & Eric just recently presented Jean with her first grandbaby, Anneke. Anneke has three older sisters, Isabella, Olivia and Imogen. In her spare time you can find Jean on the golf course or in the curling rink. Jean enjoys both sports but does not claim to play either of them well. She is a member of the Board of Directors at the Elora Curling Club and for the past 20 years has been in charge of preparing the Christmas dinner for seniors at First Christian Reformed Church in Guelph. Each fall Jean is involved in two fundraisers; ‘Run for the Cure’ to support breast cancer research and a golf tournament hosted by her children in memory of husband and father, George, with proceeds being donated to Beginnings Guelph, a crisis pregnancy counseling centre. Jean enjoys traveling and has been to Amsterdam, Brussels, Paris, New York City, and western Canada in the past few years. Jean’s best vacation to date was exploring New Mexico and Arizona during spring break.

In October 1979 Jean accepted a job with the Graduate Students’ Association and spent the next ten years working part-time for a large variety of GSA executive members. Jean joined the Department of Crop Science in October 1989 and became Administrative Support for the Graduate Program in 1996. Jean enjoys the interaction with students and finds the job very rewarding; especially interesting are international students and their stories. Jean feels that the formation of the Graduate Student Liaison Committee was a good move; she hopes that incoming students realize the benefit of this committee and will participate in the continuity of the work put into it by the current committee members.
On Wednesday, July 30, 2008, the OAC Weeds Team arrived at the University of Delaware, Elbert N. & Anne V. Carvel Research and Education Center located in Georgetown, Delaware. One graduate and three undergraduate teams competed in the 2008 Northeastern Weed Science Society's Collegiate Weed Science Contest. The purpose of this contest is to provide students with an educational experience that tests their skills in the disciplines of crop protection and agronomy. A total of 40 graduate and undergraduate students participated from five universities. The universities represented were Guelph, Cornell, North Carolina State, Penn State, and Virginia Tech.

The University of Guelph, undergraduate teams placed first and third in this year’s competition. The first place OAC Weeds Team members were Blair Scott, Kelly O’Connor, and James Ferrier. The third place team consisted of Tyler Denham, Will Sebben, Scott Snowe, and Amanda Green. Blair Scott received the top award for the highest mark achieved by an undergraduate student in the competition. In addition, the undergraduate team of Andrew Reid, Ryan Stafford, Blair Freeman, Craig Annett and the graduate team consisting of Meghan Moran, Emily Green-Tracewicz, and Scott Cressman competed well and placed competitively within their categories. Several team members were acknowledged for their top ranking in the various events.

Guelph undergraduate teams have dominated the Northeastern Weed Science Society's Collegiate Weed Science Contest with 14 first place wins since 1983. The team was coached by Dr. Clarence Swanton. Special thanks go to Peter Smith and Mike Cowbrough for their contributions to the success of the 2008 OAC Weeds Team. The financial support of Bayer CropScience Inc., Monsanto Canada Inc., J. Mudryj Regulatory Consultants, Syngenta Crop Protection Canada Inc., E.I. DuPont Canada and Dow AgroSciences Canada Inc. is gratefully acknowledged.
If you are part of Plant Agriculture, are on the Guelph campus and have been around for a while, then you probably have been using the Novell server PLANTSRV. This server is now close to being shut down. The replacement is Central File Service (CFS), being offered by Computing Services.

**History of Novell in Plant Ag./Crop Science**

Plantsrv has been around since February 2001. Its predecessor, CSNET, was created in August 1992, so we have had Novell around for over 16 years.

Computing Services has shifted their support from Novell to Microsoft server-based systems, and we have been advised that it is time to make the switch to CFS. After running for over 7 years, the current hardware of Plantsrv is getting to the end of its life as well.

Like our Novell server, the CFS server and storage are located in a very secure area, are backed up regularly and are accessible from various workstations once they have been configured for the CFS domain. The shared disk areas/folders reserved for Plant Ag., and special lab groups, allow for lab collaboration.

**Getting functional with CFS**

Users having a UoG “central account”, which is mainly used for e-mail, can also have a corresponding CFS account. Faculty and staff will be allocated 800MB of disk space (quota) and grad/undergrad students will be allocated 200MB of quota. This is separate from your disk quota set for e-mail.

A one-time step of **synchronizing your password** between your central account and CFS is required. Follow the instruction at the following “change password” link to do this: [https://www.uoguelph.ca/ccs/apps/password/change/](https://www.uoguelph.ca/ccs/apps/password/change/)

If you are happy with your current password, you can reuse it for the “new” and “confirmation” fields. However, in the event that your current password does not meet the minimum complexity rules listed, your existing password may need to be changed.

**Getting your machine (workstation) configured.**

Your workstation must have either a minimum of Windows XP PRO or Vista Business Ed. operating systems to be configured for CFS access. Currently there is no support for MAC users.
The machine's name must conform to the UoG domain naming convention which is limited to 15 characters and must have the format of:

```
Dept.-building-room-machine#
```

(i.e. PA-CROP-213-5 or PA-BOVEY-3109-2)

Once named properly, the workstation can then become part of the CFS domain (full domain name is: ‘cfs.uoguelph.ca’). To accomplish this step, contact an IT tech (Mike Peppard or myself) to configure your machine.

In order to provide you with access to the mapped network drives of ‘G’ and ‘H’, Mike Peppard or I will need to **add your userid to the ‘PlantAg’ CFS group**. The ‘G’ drive contains various folders of ‘shared’ information and your access to those folders will be dependent upon whether or not your userid has been added to that CFS group (i.e. if you have been given access to the ‘weeds’ group, then the contents of the ‘g:\weeds’ folder will be viewable). The ‘H’ drive will be available for the storage of your personal files/folders.

If you still have a Plantsrv account and have not yet had your files/folders migrated to CFS, let Mike or I know and we can arrange to have that done.

**WebSights**

It’s the little things that count - **Agricultural Nanotechnology** on the Web. Check out the small world of nanotechnology and agriculture with these links to reports, web links, and government resources.

USDA Nanotechnology **Quick Overview** [http://www.csrees.usda.gov/nanotechnology.cfm](http://www.csrees.usda.gov/nanotechnology.cfm)


**Other:** The Nano Café: [http://www.nanocafes.org/nanoproducts_food](http://www.nanocafes.org/nanoproducts_food)

**Travel Tip:** Forget traditional Bed & Breakfast accommodations, according to the September issue of **Budget Travel** you can save money by “Bunking with a scientist” [http://www.budgettravel.com/bt-dyn/content/article/2008/08/04/AR2008080401526.html?wpisrc=newsletter](http://www.budgettravel.com/bt-dyn/content/article/2008/08/04/AR2008080401526.html?wpisrc=newsletter) Let me know how it works out.
**Library News** in the fall is all about navigating the library resources new and old that support successful learning and teaching outcomes.

Classes are available in the library on using RefWorks and Write n Cite to capture reference citations, create bibliographies, and share this information with others. RefShare is the new product in this package. Save writing time and organize your research references with this Internet based product.

Other classes on database searching are available to introduce or refresh the art of using science databases to support your work. Sign up for all workshops here. [http://www.uoguelph.ca/studentaffairs/reg/](http://www.uoguelph.ca/studentaffairs/reg/) If workshops appear to be full it never hurts to show up to see if there are any last minute cancellations.

The Learning Commons provides services to both grad and undergrads focusing on successful writing and research presentation. In addition to help for the writing process, they offer support for presentation preparation, time management, and various research and study needs. Their workshops this fall include **The Graduate Thesis Writing Process: Covering the Basics**, **Research Survival Drop-in**, **Data Analysis in SPSS 1 - Getting Comfortable with your Data**, and **Academic Presentation Skills for Graduate Students**. Browse the rest and sign up using the link above.

Don’t forget the Library Data Resource Centre near the Reference Desk where special Statistical and Graphical Information Systems software is kept. Expert assistance and consultation is available from 10 to 4 weekdays. [http://www.lib.uoguelph.ca/resources/data_resource_centre/](http://www.lib.uoguelph.ca/resources/data_resource_centre/)

More computers have been purchased by the library and there are now 150 laptops available from the reserve desk for use in two hour increments as well as additional stand alone computers installed in the lower level near the Government Document section which gives a total of 300 desktop workstations.

As always if you need a quiet place on campus to call your own graduate carrels are available for term reserve. These come with a locking bookcase where materials can be safely stored. The McLaughlin Library building has a limited number of individual small offices for graduate students for the preparation of comprehensive and/or final thesis. The assignment period is one semester. These are also available for faculty (including contractually limited appointments) on study or research leave. The assignment period is the duration of the leave, to a maximum of one year. More information on all library study space is available here [http://www.lib.uoguelph.ca/research/study_space/](http://www.lib.uoguelph.ca/research/study_space/).

For individual research consultations or questions about the library and its services please contact me at [jwanner@uoguelph.ca](mailto:jwanner@uoguelph.ca) or ext. 54055. Judy Wanner, Plant Agriculture Liaison Librarian
Conference Activities

Congratulations to **Mayumi Acosta Bastidas** who won first prize for her poster at the 12th Biennial Meeting of the Molecular and cellular Biology of the Soybean. The conference was held in Indianapolis from July 20-23. Mayumi’s poster was entitled “Validation of QTLs for SCN resistance in two inter-specific soybean populations”, co-authored by Mayumi Acosta, Tom Welacky and Istvan Rajcan. Well done Mayumi, the Department is very proud of you and your accomplishment!!

Mary Ruth McDonald recently presented a number of posters at the 79th Annual Meeting of the Canadian Phytopathological Society which was held in Charlottetown, June 15-28/08:


Saude, C., and M.R. McDonald. 2008. *Sclerotinia sclerotiorum* and *Botrytis cinerea* are major storage pathogens of Belgium endive in Ontario.


Other conference presentations include:


Recent Publications


Congratulations to Angela Hill on the birth of her 5th grandchild. Addison Isabel-Ina Hill arrived July 8th weighing in at a healthy 7 lbs. 12 oz.

Jean Wolting also became a grandmother for the first time this summer. Anneke Claire Wolting Adrade was born on July 16 at 5:50 am weighing in at 8 lbs 14 oz and 21 inches long. Congratulations Jean!

Angie Trivett is this year’s recipient of the Susanne Sprowl Award which was presented at the Community Breakfast on September 2. The Susanne Sprowl Award is presented by the Steelworkers to an employee of the University for unwavering dedication to their community. We congratulate Angie on receiving this award and applaud her spirit. This is the 3rd year in a row that a Plant Agriculture staff member has been the recipient of this award, in 2006 Jen Kingswell received this award and Jim Hoare was the 2007 recipient. This is a testament to the spirit that lives in the Plant Agriculture staff!

The Department was saddened by the death of George Jones in August at the age of 85. George was a faculty member in Crop Science for many years and was well known for his wit and story-telling. Aside from his good humour though, George was a real pioneer in Ontario agriculture and played a major role in turning corn and soybeans into major Ontario crops for which in 2006 George was inducted into the Ontario Agricultural Hall of Fame.

Also, in August Dr. Ernie Kerr passed away in his 92nd year. Dr. Kerr was arguably Canada’s most successful vegetable breeder and worked at the Research Institute at Vineland before transferring to the Simcoe Research Station in the 1970s. Dr. Kerr was inducted into the Ontario Agricultural Hall of Fame in 2001.
The 2nd Plant Agriculture Retreat will be held February 17 & 18, 2009 in Niagara Falls. More details coming very soon, but for now make sure to save the date. The 2009 retreat will be even bigger and better than the last one!

Dr. Robert Gordon, Dean of OAC will be visiting the Department on Wednesday, October 15 at 10:00 to meet with Department personnel. This general department meeting is open to all members of Plant Agriculture (location to be announced). This is your opportunity to meet our new Dean, everyone is welcome to attend, refreshments will be available.

**Fall Fairs**

Tis the season for fall fairs, and they are numerous, just a few of the upcoming fairs:

- Ripley-Huron Fall Fair; Sept. 26-27 (www.ripleyfair.ca)
- Milton Fall Fair, Sept. 26-28 (www.miltonfair.com)
- Markham Fall Fair, Oct. 2-5 (www.markhamfair.ca)
- Erin Fall Fair; Oct. 10-13 (www.erinfair.ca)
- Norfolk County Fair & Horse Show; Oct. 7-13 (www.norfair.com)
- Woodbridge Fall Fair, Oct. 11-12; (www.woodbridgefair.com)

**and of course:**

The Royal Agricultural Winter Fair to be held in Toronto November 7-16 (www.royalfair.org)

**Research Lab Manager’s Boot Camp—Friday, October 24/08**

This lab managers’ boot camp, the first in a series is tailored to share challenges and opportunities in this field and provide vital training to current or future lab managers. There will be something for everyone whether you are a grad student, staff, faculty member, supervising or managing a research lab or will be in this role in the near future. This professional development program has been organized by members of the Department of Plant Agriculture, led by M. Javaid Iqbal and will be held at the University Centre. Further information and registration details can be found at: www.plant.uoguelph.ca/events/labcamp

The Community Shared Agricultural Conference will be held November 21-23 at the Geneva Park Conference Centre in Orillia. For more information please see: http://www.csaconference2008.ca/home.html
Coming in the December edition:
Helen Fisher/Judy Strommer—wine program
Highlight on Vineland
Update on Opening of the Guelph Centre for Urban Organic Farming
More grad profiles
Another staff profile

Dr. R. Van Acker, Chair
Dr. B. Grodzinski - Graduate Coordinator

Program Counsellors:
Dr. E.A. Clark—Organic
Dr. F. Tardif—Crops
Dr. J.A. Sullivan—Hort
Dr. E. Lyons—Turf
Dr. D. Wolyn—Plant Biology & Plant Biotechnology

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