

***Dr. John Cline
Tree Fruit Physiology***

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



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

(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

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/>.



The Simcoe Research Station has 86 ha of land, of which approximately 15-20 is used for tree fruit (apples, peaches) research.