Christopher Charles Gottschalk
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Education

2015 – 2020	Michigan State University, East Lansing, MI 48824 Dissertation: *Elucidating the Genetic Mechanisms of Flowering and the Repression of Floral Initiation by Fruit in Apple (Malus x Domestica Borkh.)* Ph.D. Plant Breeding, Genetics and Biotechnology – Horticulture
2008 – 2013	Michigan State University, East Lansing, MI 48824 Bachelor of Science – Plant Biology

Funded Proposals

2021	"Evaluation of Malus angustifolia from the Southern U.S. for Traits Related to Abiotic Stress Resilience" - USDA CGC Evaluation Program FY2021 **Co-PI: Chris Gottschalk** and Lisa Tang - $20,000
2019	"Phenomic Applications in Plant Breeding" - 2019 MSU Plant Breeding, Genetics and Biotechnology/NRT/Corteva Symposium Corteva Plant Symposium Series - **Co-Organizers**: **Chris Gottschalk** and Natalie Kaiser - $6,000
2018 - 2020	"Identification of Superior Apple Cultivars for Novel Applications in Michigan". Michigan State Horticulture Society and the Michigan Department of Agriculture and Rural Development, **Co-PI**: Steve van Nocker and **Chris Gottschalk** - $82,813
2018 - 2019	"Optimization of Gibberellin- and Cytokinin-Based Programs for Control of Flowering and Crop Load in 'Honeycrisp'". Michigan Apple Committee, PI: Steve van Nocker, Co-author: **Chris Gottschalk** - $29,444
2016 - 2017	"Great Lakes Cider Apple Collection and MSU Cider Apple Trait Database". Michigan State Horticulture Society, PI: Steve van Nocker, Co-author: **Chris Gottschalk** - $9,800

Cultivar Release and Inventions

2022	*Pyrus communis* cv. Bell – Chris Dardick, Mark Demuth, Chris Gottschalk, James Schupp

Highlighted Awards

2020	College of Agriculture & Natural Resources and Dissertation Completion Fellowship - $8500
2020	John L. Arend Excellence in Horticulture Graduate Student Research Scholarship - $2000
2019	Plant Breeding, Genetics and Biotechnology Program Jason and Dana Lilly Fund for Graduate Student Enhancement- $1250
2017	John M. Bukovac Outstanding Horticulture Graduate Student Award - $2000
2017	Jordan B. Tatter Memorial Scholarship in Horticulture - $2500
2017	John L. Arend Excellence in Horticulture Graduate Student Research Scholarship - $1500
2016 – 2017	Plant Science Fellowship $30,000
2016	Michigan State Horticulture Society Fruit & Vegetable Industry Scholarship - $1500
2016	Horticulture Graduate Office Fellowship - $1000

Publications (* - equal contributions)

ResearchGate: 2,911reads, 111 citations, 11.06 RG score
Google Scholar: *h*-index = 5, 112 citations
ORCID iD: https://orcid.org/0000-0003-4584-0014

2022 VanderWeide, Joshua, Steve van Nocker, and **Chris Gottschalk**. Meta-analysis of apple (Malus x domestica Borkh.) fruit and juice quality traits for potential use in hard cider production. Plants People Plant. (*accepted*)

2021 VanderWeide, Joshua, **Chris Gottschalk**, Steve Schultze, Esmaeil Nassrollahiazar, and Paolo Sabbatini. Impacts of pre-bloom leaf removal on wine grape production and quality parameters: A meta-analysis. Frontiers in Plant Science 11: 621585.

2021 **Gottschalk, Chris**, Songwen Zhang, Phil Schwallier, Sean Rogers, M. John Bukovac, and Steve van Nocker. Genetic mechanisms associated with the repressive effect of fruit on floral initiation in apple (*Malus* x *domestica* Borkh). PLoS One 16(2): e0245487.

2020 Miles, Carol, Travis Alexander, Suzette Galinato, Nikki Rothwell, Greg Peck, **Chris Gottschalk,** and Steve van Nocker. Growing apples for hard cider production in the U.S. - Trends and research opportunities. HortTechnology 30(2): 148-155.

2019 Peace, Cameron, Luca Bianco, Michela Troggio, Eric van de Weg, Nicholas Howard, Amandine Cornille, Charles Eric Durel, Sean Myles, Zoë Migicovsky, Robert Schaffer, Evelyne Costes, Gennaro Fazio, Hisayo Yamane, Steve van Nocker, **Chris Gottschalk**, Fabrizio Costa, David Chagné, Xingzhong Zhang, Andrea Patocchi, Susan Gardiner, Craig Hardner, Satish Kumar, Francois Laurens, Etienne Bucher, Dorrie Main, Sook Jung, and Stijn Vanderzande. Apple whole genome sequences: recent advances and new prospects. Horticulture Research 6:59.

2019 Zhang, Songwen, **Chris Gottschalk**, and Steve van Nocker. Genetic mechanisms in the repression of flowering by gibberellins in apple (*Malus* x *domestica* Borkh.). BMC Genomics 20:747.

2018 van Nocker, Steve and **Chris Gottschalk**. Red-juiced apple cultivars for Great Lakes production Fruit Quarterly - New York State Horticultural Society. Winter 2018.

2017 **Gottschalk, Chris**, Nikki Rothwell, and Steve van Nocker. Apple varieties for production of hard cider in Michigan. Michigan State University Extension. Bulletin E3364.

2013 **Gottschalk, Chris** and Steve van Nocker. Diversity in Seasonal Bloom Time and Floral Development among Apple Species and Hybrids. J. Amer. Soc. Hort. Sci. September 2013 138:367-374.

Recent Talks

2020 **Gottschalk, Chris**. Red-fleshed apple history, performance, and improvement for cider production. ASHS Webinar. **Invited**

2020 **Gottschalk, Chris**. Red-Juice apple cultivars for hard cider production. Empire State Producers Expo, Syracuse, NY **Invited**

2020 **Gottschalk, Chris**. Cider Varieties and Red Flesh Breeding Program. GLEXPO, Grand Rapids, MI. **Invited**

2019 **Gottschalk, Chris**. Characterization of early floral development in extremely early- and late-blooming *Malus* species and cultivars. 6th Annual Horticulture Research Conference, Venice, IT.

2019 **Gottschalk, Chris**. Hard Cider. HRT430 - Vines to Wines, East Lansing, MI.

2019 **Gottschalk, Chris**. Red-juice apples and their use in rosé ciders. CiderCon, Chicago, IL. **Invited**

2018 **Gottschalk, Chris**. Optimization of gibberellin and cytokinin-based programs for control of alternate bearing in 'Honeycrisp'. Michigan Apple Commission Research Review Board Meeting, GLEXPO, Grand Rapids, MI.

Recent Poster Presentations

2019 **Gottschalk, Chris**, Phil Schwallier, and Steve van Nocker. Identification of superior apple cultivars for hard cider production in Michigan. Corteva-PBGB-NRT IMPACTS symposium, East Lansing, MI.

2019 Steve van Nocker, **Gottschalk, Chris**, John Bukovac, and Phil Schwallier. Optimization of gibberellin-based programs for control of flowering and crop load in 'Honeycrisp'. GLEXPO, Grand Rapids, MI.

2019 **Gottschalk, Chris**, Phil Schwallier, and Steve van Nocker. Identification of superior apple cultivars for hard cider production in Michigan. GLEXPO, Grand Rapids, MI.