PLANT PATHOLOGY SESSION
Moderator — D.Corey Noyes, Michigan State University

9:20  Selecting carrots with increased resistance to cavity spot. M. R. McDonald, K. Vander Kooi, and P.W. Simon,

9:40  Distribution of *Xanthomonas hortorum* pv. *carotae* in Commercial Carrot Seed Lots. Jeremiah Dung

10:00  Break — View posters; presenters will be at posters to answer questions

10:20  Pythium diseases of carrots. Joe Nunez

10:40  Carrot viruses in the UK - an agronomic challenge! Howard Hinds

11:00  Understanding the ecology and epidemiology of *Pythium violae* causing cavity spot on carrot. Kathryn Hales

11:20  Pest management in California fresh carrot from 1995 to 2015. Jim Farrar

11:40  Evaluation of Flea Beetle Phenology and Damage to Carrot Production in California. David Haviland

12:00 PM  Lunch!
NEMATOLOGY SESSION  
Moderator—Mary Ruth Mc Donald, University of Guelph

1:30  Managing root-knot nematodes in organic carrot production – an overview of California studies.  
Antoon Ploeg, J.O. Becker, and J. Nunez,

1:50  Evaluation of new nematicides for control of nematodes in carrots, in Ontario, Canada.  
K. Vander Kooi, D. Van Dyk, and M. R. McDonald

2:10  New nematicides provide effective protection against root-knot nematodes.  
J. Ole Becker, Antoon Ploeg, and Joe Nunez

2:30  Root-knot variability in response to carrot resistance.  
Philip A. Roberts, William C. Matthews, Philipp W. Simon and Tra T. Duong

2:50  Effects of a commercial soil amendment on plant parasitic nematodes.  
Amanda Hodson

3:10  Break

CARROT PRODUCTION SESSION  
Moderator—Jim Farrar, UC Davis

3:40  Effects of biotic and abiotic stress on carotenoid content in carrot.  
Geoffriau Emmanuel, Perrin Florent, Dubois-Laurent Cécile, Huet Sébastien, Suel Anita, Le Clerc Valérie, Briard Mathilde, Peltier Didier

4:00  Cover crops effects on nitrogen and weeds in MI processing carrots.  
D. Corey Noyes, Zachary D. Hayden, Haddish Melakeberhan, Ben Werling, and D.C. Brainard

4:20  Adjourn
The Search for Salinity Tolerance in Diverse Carrot Germplasm.
Adam Bolton and Phil Simon

Characterization of a genomic region under selection in cultivated carrot (Daucus carota subsp. sativus) reveals a candidate domestication gene.
Alicja Macko-Podgórni, Gabriela Machaj, Katarzyna Stelmach, Douglas Senalik, Ewa Grzebelus, Alicja Macko-Podgórni, Gabriela Machaj, Katarzyna Stelmach, Massimo Iorizzo, Philipp W. Simon, Dariusz Grzebelus, Alicja Macko-Podgórni, Gabriela Machaj and Katarzyna Stelmach

New carrot germplasm from Spain and its use in breeding, genetic, and taxonomic studies.
David M. Spooner, Philipp W. Simon, and Fernando Martínez-Flores

The influence of organic and conventional production environments on breeding for carrot top size.
Charlene Grahn, Erin Silva, Philip Simon

Break—View posters; presenters will be at posters to answer questions
BREEDING AND VARIETY EVALUATION—SESSION II
Moderator—Emmanuel Geoffriau, University of Angers, France

10:50  Elicitation of anthocyanins in hairy root cultures of black carrots.  
Shih-Ti Chen, Gregorio Barba Espin, Trine Bundgaard Andersen, Renate Müller, Henrik Lütken and Bjarne Jørnsgård

11:10  Phenotypic, Genotypic, and Freedom to Operate Variation in US Carrot Cultivars.  
Claire Luby, Julie Dawson and Irwin Goldman

11:30  Genetic Analysis of Carrot Root Shape and Top Size Measured by Image Analysis.  
Sarah Turner, Nathan Miller, Edgar Spalding and Phil Simon

12:00  Lunch
BREEDING AND VARIETY EVALUATION—SESSION III
Moderator—David Spooner, USDA/ARS University of Wisconsin

1:30  Population Structure in domesticated Carrot (Daucus carota) from USDA NPGS, Historic and Modern Cultivars.
     *S. Ellison, K. Corak, C. Luby, I. Goldman, P. Simon and J. Dawson*

1:50  Utilizing 2D Imaging to Map Root System Architecture QTL in Carrot (Daucus carota L.)
     *Shelby Ellison and Philipp Simon*

2:10  Sources of Genetic Variation for Early Plant Growth in Diverse Carrot Germplasm.
     *Adam Bolton and Phil Simon*

2:30  Deploying Meloidogyne incognita Nematode Resistance in Carrot.
     *Phil Simon, Joe Nunez, William Matthews and Phil Roberts*

2:50  Marker development for genes of the carrot terpene biosynthesis.
     *Thomas Nothnagel, Holger Budahn, Detlef Ulrich, Jens Keilwagen, Thomas Berner, Heike Lehnert and Frank Dunemann*

3:10  Planning for the 39th International Carrot Conference and other Items

3:30  Adjourn