**SAES-422 Multistate Research Activity Accomplishments Report**

**Project No. NC 140 and Title:** Improving Economic and Environmental Sustainability in Tree-Fruit Production Through Changes in Rootstock Use

**Period Covered:** Oct. 1, 2015 to Sept 30, 2016

**Annual Meeting Dates:** November 9-10, Penn State Univ., State College, PA

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**2015-16 Published Written Works**

**Books**


**Refereed Journal Articles**


**Symposium Proceedings**


**Poster Presentations**

**Popular Articles**


Tepe, E., E. Hoover, et al., 2016. extension.org/apples

Tepe, E., E. Hoover, et al., 2016. Commercial Fruit Extension (fruit.cfans.umn.edu)

Tepe E. and E. Hoover, 2016. Growing Fruit in the Northern Garden (available free on iBooks)


**Other Creative Works**


North Carolina State University produced 2 videos on apple rootstocks and higher density training systems.

**Scientific and Outreach Oral Presentations**


Black, B. and T. Roper. 28 June 2016. NC-140 plantings were featured at the Kaysville Fruit and Vegetable Field day. The tree fruit sessions had over 60 participants.


Blatt, S. 2016. Update on NC-140 Rootstock trials: Honeycrisp, Sweet Cherry and Modi. Oral presentation of my research results to members of the NS, NB and PEI tree fruit industry. Field Orchard Tour hosted by the Nova Scotia Fruit Growers Association, August 2016.


Lang, G.A. 2016. Update on Apple Rootstock Research at MSU, SW Hort Days, Benton Harbor, MI; Feb 4.


Lang, G.A. 2016. Sistemas Intensivos de Producción de Cerezas: Manejo Sustenable. 7th Region Extension (Curico, Chile), Oct. 18-19.


Parker, M.L. January 2016. Peach Production Orchard Tour and Workshop with an emphasis on peach rootstocks and subsequent management. Attendance 50.


Shengrui Yao. 2016. Fruit research update at NMSU Alcalde Center (with 2015 organic apple rootstock trial included). Presented at the New Mexico Fruit Growers Annual Workshop on March 4, 2016.


Fund Leveraging, specifically, collaborative grants between stations and members.

NC-140 members have written research proposals and attracted extramural funding associated or directly related to the five objectives of this project from local, regional, national and international funding sources. For fiscal year 2015/2016, funding and matching funds reported by members amounted to $1,590,140 plus $38,000 in-kind support from primarily commodity groups, state and competitive grant sources.


Cline, J. 2016. Canadian Horticultural Council. $30,000
Cochran, D.R. 2016. Dwarfing Rootstocks. Iowa Dept. of Agri. and Land Stewardship Specialty Crop Block Grant. $1,700 in-kind for land and equipment usage plus $11,000.


Fallahi, E. 2016. Support in kind for agricultural chemicals from Wilbur Ellis Company, University of Idaho. $6,000.

Fallahi, E. 2015. Labor and equipment (in-kind) from Idaho fruit industry for operation of various apple rootstock projects. Idaho Fruit Industry. $6,800.00


Lang, G.A. 2016. Trellised Protected Orchard Systems. International Fruit Tree Association. $9,000.


Lang, G.A. 2016. (in-kind). Al-Mar Orchards, Flushing, MI; Land use and maintenance for apple rootstock trial. $2,500
Lang, G.A. 2016. (in-kind). Rasch Orchards, Sparta, MI; Land use and maintenance for apple rootstock trial. $2,500

Parker, M.L. NC Legislature/Special Bill funding for apple research - $9,000.


New York. 2016. High-Density Planting Systems and Rootstocks for Sweet Cherries in the East. - Sponsored by International Fruit Tree Association ($9,000).

New York. 2016. Orchard management systems for improved yield and fruit quality – Sponsored by Apple Research and Development Program ($68,000).


Reighard, G. 2016. “Screening peach rootstocks for adaptability, productivity, and tolerance to Armillaria and bacterial canker”. South Carolina Peach Council research grant. $4,000.


Song, J, Forge, T, Blatt, S, Neilsen D, Forney, C and Burgher-MacLellan, K. 2015-2018 (3 years). Costs of supporting the apple and cherry rootstock trials covered by AAFC’s A-base funding, project J-001036.001: ‘Developing more resilient tree fruit production systems from the ground up: Rootstocks with enhanced tolerance to emerging biotic threats to orchard health’.


Yoder, K.S. 2016-2017. Apple rootstock susceptibility to Tomato Ring Spot Virus (TmRSV) and latent viruses. Virginia Apple Research Program. $9,500.


Stasiak, M. 2016. Door & Kewaunee Co. commercial fruit research and outreach support to cover apple rootstock planting maintenance. $5,000.


