

NCCC-212 Small Fruit & Viticulture 2020 Report University of Maine

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Objective 1.

2017-2019 Strawberry Variety Trial

A variety trial was established in the spring of 2017 at Highmoor Farm in Monmouth, ME. Thirteen varieties were planted and established as matted rows on narrow raised beds with four replications. Plots were 20 feet long and 22 inches wide with a single trickle irrigation line running beneath the beds. Yield and fruit quality data were collected in the spring of 2018 and 2019 (see table).

2020-2013 Small Fruit Variety Trials

New variety trials for matted row strawberries, hardy northern highbush blueberries and red raspberries are being established at Highmoor Farm in Monmouth, ME. This is part of a Maine Specialty Crop Block Grant “*Expanding Maine’s Berry Industry to Improve Farm Profitability*”. The strawberry trial was planted in 2020 and is being established as narrow matted rows, with 13 varieties, replicated four times. The highbush blueberry trial was planted in 2020, with 12 varieties, replicated four times, using potted, two-year-old plants. The raspberry trial will be established in 2021 due to difficulties in obtaining plant stock.

Elderberry Variety Trial

An elderberry variety trial was planted at Highmoor Farm in Monmouth, Maine in the spring of 2019. Due to issues with planting stock, the plants were grown in pots for the 2018 season to improve uniformity. Drought conditions and deer browsing affected growth of the plants in 2020. During the spring of 2021, plants will be evaluated for winter hardiness, disease susceptibility, yield and fruit characteristics.

Grape Variety Demonstration Planting

Sixteen varieties of hardy table and wine grapes were planted in 2009 at Highmoor Farm in Monmouth, ME. Each cultivar is trained to both 4-arm kniffin and umbrella kniffin systems. To date, the *Lubrusca* types have generally been successful, with the exception of Canadice. Bluebell and Vanessa have performed very well. Among the *Vinifera* hybrids, St. Croix, M. Foch, Frontenac, Sabrevois and Marquette have performed well. Brianna and Alpenglow are also promising. Landott, Carot Noir and Noiret have had poor winter survival and have recently been replaced with L’Acadie Blanc, Itasca, Petite Pearl, and Adalmiina.

Objective 2.

2017 Prohexadion-calcium applications for matted row strawberries

Strawberry plants (Flavorfest) were established in a raised bed matted-row system in the spring of 2017. Following plant establishment two rates of Apogee were applied either once or twice, the latter three weeks apart (8/21, 9/11). Treatments were repeated following standard matted row renovation practices in August/September 2018 and 2019. Based on previous work with plasticulture systems, we hope to

determine the potential for prohexadione-calcium as a method to manipulate vegetative growth; specifically, to reduce runners and increase branch crowns. Data from the trial is being analyzed.

Strawberry Integrated Pest Management Program: We monitor 10 commercial strawberry sites in southern and mid-state Maine for strawberry pests from April-June. We publish a weekly newsletter and blog regarding the pest situation in local strawberry fields during the pre-harvest season.

Impacts: Recent program evaluations by growers indicate that nearly all participants have reduced pesticide applications (83%) and costs (100%) as a result of the program. Additionally, growers now time sprays in response to pest monitoring results, and most have adopted at least one non-chemical alternative pest management strategy.

Tarnished Plant Bug Parasitism Survey

Tarnished plant bug pressure in strawberries has appeared to decline over the past three decades in the northeastern United States, thought to be due to the introduction of a parasite, *Peristenus digoneutis*. However, in recent years populations of this pest and its damage, seem to be increasing. In 2021, we will begin surveying TPB nymphs in Maine to determine the current level of parasitism in the population. This survey will be carried out in cooperation with the Maine department of Agriculture, Forestry and Conservation and USDA-APHIS.

Spotted-Wing Drosophila We monitored nine commercial small fruit sites in southern and central Maine this season for spotted wing drosophila, using vinegar/flour/yeast-baited traps. Information on SWD populations and management recommendations were passed on to growers throughout the state through a weekly electronic newsletter and blog (<https://extension.umaine.edu/highmoor/blog/tag/spotted-wing-drosophila/>).

Impacts: over 200 Maine growers receive the spotted wing drosophila updates. Program surveys found that most growers now aware of this pest and, use this program, to access to management information.

Other Publications:

Wild Blueberry Research & Extension

The University of Maine has an extensive research and Extension program for wild blueberries (*Vaccinium angustifolium*), most recently concentrating on pest management, pollination and food safety. For any members interested in seeing the latest project reports, They are available as pdf files. You can contact me (david.handley@maine.edu) or Lily Calderwood, Wild Blueberry Specialist (lily.calderwood@maine.edu) for a copy.

Strawberry Variety Trial 2018-2019
Highmoor Farm, University of Maine

Variety	2018 Kg/Plot	2019 Kg/Plot	Fruit Size (g)¹	Season	Comments
Wendy	4.8	6.0	10.4	Early	Productive, attractive, good flavor
Archer	3.6	1.7	14.3	Early	Good size & appearance, good flavor, winter injury
Galletta	3.1	4.9	13.8	Early	Good size & appearance, uniform
Lila	7.0	6.3	10.4	Early-mid	Large, attractive, good flavor. Red steles res.
Flavorfest	5.7	2.8	10.2	Early-mid	Large, attractive, good flavor. Red steles res.
Yambu	7.9	10.3	11.1	Early-mid	Large, attractive, firm, variable flavor
Rutgers Scarlet	2.7	3.0	10.3	Midseason	Attractive, good flavor, low yields
Jewel	12.6	8.3	10.0	Midseason	Good size, attractive, glossy, firm
Laurel	11.6	8.9	8.4	Midseason	Attractive fruit, not large Red stele res.
Cabot	7.5	2.5	18.3	Mid-late	V. large fruit, many misshapen, good flavor
Mayflower	8.1	6.6	9.9	Mid-late	Large fruit; size falls fast. Light, dull color, tart
Valley Sunset	5.6	3.2	15.4	Late	Large, attractive fruit, good flavor, winter injury
Malwina	3.5	1.2	13.3	V. late	Dark color, very firm, good flavor, winter injury

Plots 20' long x 1.5' wide raised bed matted rows, planted 2017. Each variety replicated four times.

¹Average fruit size over entire harvest season