

## Washington Red Raspberry Commission Progress Report for 2018

**Project number:** 3455-6640

**Title:** Comparison of Alternate- and Every-Year Production in Summer-Bearing Red Raspberry

**Personnel:** Lisa Wasko DeVetter (PI), Suzette Galinato, and Chris Benedict. Jonathan Maberry is a farmer collaborator/cooperator for both experiments.

**Reporting Period:** This report presents data from 2018 (3 years after the project was initiated)

### Accomplishments:

- AY and EY treatments were maintained in Mr. Jon Maberry's field in Lynden, WA.
- Modified bed experiment was established in Mr. Jon Maberry's field in Lynden, WA.
- All data collection occurred as planned, although we are collecting additional cultivar data from 'Meeker' and 'WakeField' in addition to 'Whatcom' and 'WakeHaven' for the modified bed experiment.
- A newsletter article to be published in the *Whatcom Ag Monthly (WAM)* is in preparation and should be published July 2019. Information will also be posted on DeVetter's program website (<https://smallfruits.wsu.edu/>).

**Results: 1) AY/EY Experiment:** Primocane height was greatest in the AY treatment and was 27 inches greater than the EY treatment ( $P < 0.0001$ ). Primocane node number was greatest in the AY treatment, whereas internode length was greatest in the EY treatment ( $P < 0.0001$  for both variables). Thus, primocanes were on average taller with more nodes but with shorter internode lengths in the AY treatment. There were no differences in primocane number/hill in 2018 ( $P = 0.28$ ). Macro- and micro-nutrient data are similar between treatments. However, tissue nitrogen was numerically greater in the EY treatment at 3.1%, whereas it was 2.7% in the AY treatment. No yield nor fruit quality data were collected from the AY treatment, as 2018 was an "off" year. Average yield per row, primocane number/hill, and primocane height across the four years of the study are 2,632 lbs/row, 3 canes/hill, and 5 inches greater in the EY treatment relative to the AY treatment, respectively. This reduction in productivity in the AY treatment may be due to winter injury this treatment experienced in 2016/2017 and the plants appear to be recovering. As expected with this type of study, there are significant year, treatment, and year x treatment interactions ( $P < 0.0001$ ). Economic analyses will be completed in 2020. **2) Modified Bed Experiment.** Primocane height, number/hill, node number, and internode length differed by cultivar with height, number/hill, and node number being greatest in 'Meeker'. No differences in these variables were attributed to our bed size treatments with the exception of 'WakeField' primocane height and number/hill. Height and number/hill were greatest at the larger bed dimensions. Tissue nutrients differ more by cultivar than treatment, with 'Meeker' tissue nitrogen highest at 4.5% and lowest in 'WakeHaven' at 3.5%. No yield data were collected, as the planting was established in 2018. Unmanned aerial vehicle (UAV) data are being analyzed.

**Publications:** No publications for 2018, although an enterprise budget was published by Galinato and DeVetter in 2016. A newsletter article is in preparation and should be published in the *WAM* by July 2019 and posted on DeVetter's program website.