**Quarterly report for the NW Potato Research Consortium**

**Title:** Comparison of potato yields, soil health, and pathogen loads in virgin and non-virgin soils.

**Funded PIs:**

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**Objectives:**

1. Sample soils from virgin, non-virgin and native fields.
2. Characterize soil physical, chemical, and biological properties.
3. Quantify potato performance in microplots.
4. Learn from data.

**Progress:**

Objective 1 was completed in May of 2022. A total of 54 fields of virgin (n= 19), non-virgin (n=19), and native (n= 16) soils were sampled from the Columbia Basin (n=39) and Skagit Valley (n=15).

Objective 2 is in progress. Drs. Paulitz, Griffin LaHue, Gleason, and Frost are characterizing the soil physical, chemical, and biological properties, including pathogen and nematode loads. Also, soil samples from potato rhizosphere and roots will be collected during mid-July to study microbial communities. No insurmountable problems have yet been encountered.

Objective 3 is in progress. Microplots were established in Pullman, WA during the spring of 2022 (**Fig 1**). Pots were filled with virgin or non-virgin or native soils and potatoes were planted on 5/11/2022. Potato senescence data is being recorded every week.

Objective 4, where we analyze and learn from the data, has not yet commenced. We have no reason to think this object should not be completed on time.

A picture containing grass, outdoor, sky, ground

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**Figure 1.** Microplots in Pullman, WA.