**2019 SPGAM-AAFC Seed Variability Project Update**

**Objectives**

1. Seed Cutting - Compare growth and yield characteristics between cut and whole seed for two cultivars (Russet Burbank and Ranger Russet).
2. Suberization - Demonstrate need for proper suberization of cut seed (Russet Burbank).

* Treatments:
* Cut and allowed to suberize for 2 weeks (54-56⁰F, RH 90-95%)
* Cut and allowed to suberize 3 days (54-56⁰F, RH 90-95%)
* Cut and stored in cold (no suberization) for 3 days (33-40⁰F, RH 23-66%)
* Fresh cut (no suberization)

**Timeline**

Year 1 (2019)

* Seed Cutting
* Suberization
* Whole Seed crop grown for inclusion as a treatment in the 2020 seed cutting experiment

Year 2 (2020)

* Seed Cutting with new treatment (whole seed grown in 2019)
* Suberization
* Whole Seed crop grown for inclusion as a treatment in the 2021 seed cutting experiment

Year 3 (2021)

* Seed Cutting with new treatment (whole seed grown in 2020)
* Suberization
* Final Research Report

**Year 1 Results**

Seed Cutting

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Figure 1. Tuber yield (adjusted for shrinkage and dirt) by cutting treatment and cultivar (\*\*\* signifies differences at p<0.001)

B

AB

AB

A

Figure 2. Tuber yield (adjusted for shrinkage and dirt) by treatment (different letters signify differences at p<0.001)

Figure 3. Percentage of tubers in each size class. There were no differences among treatments.

Suberization

With initial analysis, there were no significant differences among treatments.

Average rot percentages were low (no more than 2 percent), which is likely why no differences were measured.

Figure 4. Percent rot from total harvest weight. There were no differences among any treatments.

**Plans for 2020**

* Add two new treatments to Seed Cutting
  + Whole seed grown at Carberry
  + Cut seed grown at Carberry
* Suberization will stay the same
  + May try to induce favourable rot conditions

**Contact Information**

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