HIBERNATE VARIETY by Innate

HIBERNATE TRAITS

ABILITY TO **STORE** TUBERS AT 46°F FOR UP TO 9 MONTHS AFTER HARVEST

RESISTANCE TO FOLIAR LATE BLIGHT CAUSED BY SEVERAL OF THE MOST PREVALENT STRAINS OF *PHYTOPHTHORA INFESTANS*

HIGHER SPECIFIC GRAVITY COMPARED TO OTHER CHIPPING VARIETIES

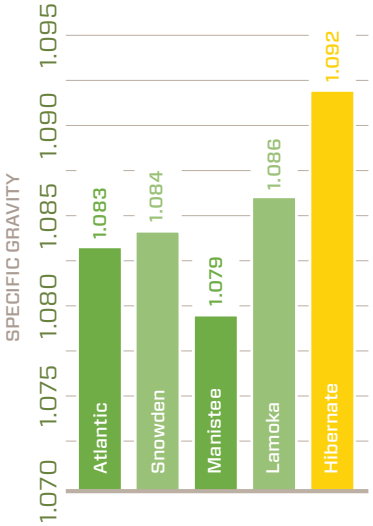
45% REDUCTION IN BLACKSPOT BRUISE COMPARED TO CONVENTIONAL ATLANTIC

Hibernate Potatoes (left) have fewer blackspots than conventional Atlantic Potatoes.

Trial inoculated with late blight. **The brown rows are conventional potato** plants with heavy infection of late blight. **The green plants are Hibernate** with late blight protection[1].

Higher Specific Gravity

Hibernate has a higher specific gravity compared to other chipping varieties[2]



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AGRONOMIC GUIDELINE SUMMARY

See "Agronomic Management Guidelines: Hibernate Variety Potatoes" for more details[4].

SEED SIZE & SPACING:

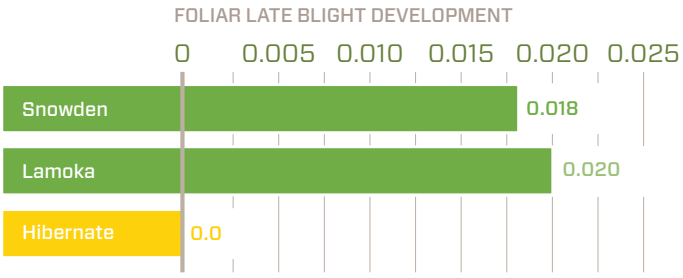
- Seed spacing depends on seed age.
- Tuber size profile in Hibernate trends slightly lower than Atlantic.
- Seed rate 23-28 cwt/acre.
- Seed size 2-3 oz.

DISEASE MANAGEMENT:

- Hibernate is protected against foliar late blight caused by strains US-8, US-22, US-23, and US-24 of Phytophthora infestans.
- Utilize trait as one part of an Integrated Pest Management Program (IPM). See "Late Blight Integrated Pest[5] Management Guide for Innate® Generation 2 Varieties".

RESISTANCE TO FOLIAR LATE BLIGHT

Resistance to foliar late blight in Hibernate can be leveraged to reduce fungicide applications by 50% and save over $120/acre.



Snowden and Lamoka = Premium Fungicide Program (9.3 lbs a.i. $250 per acre)
Hibernate = reduced fungicide program (3.0 lbs a.i. $129 per acre)
**ZERO foliar late blight infection in Hibernate with reduced fungicide program.

Temperature Range (°F)	Maximum Ramping Rate (°F/hours)
Harvest temperature to suberization range (50-55°F). Hold 2-3 weeks.	0.1°F/6 hours
52-46°F	0.1°F/12 hours

MATURITY MANAGEMENT FOR STORAGE:

- Manage irrigation and nitrogen to allow vines to senesce 14-20 days prior to vine kill. Discontinue supplemental nitrogen 40 days prior to vine kill.
- Vine kill 14-21 days before harvest.

STORAGE:

Hibernate is a late season storage variety with the ability to store up to 8-9 months at temperatures as low as 46°F, while maintaining acceptable chip color[3].

- Sucrose management for Hibernate is essential
  - o The ratio of sucrose to glucose is greater than conventional chip varieties.
  - o Monitor sugars frequently; maintain sucrose levels below 2.0 mg/g for long-term storage; sucrose levels less than 2.0 mg/g should result in low glucose.
  - o Sucrose content in Hibernate must be below 3.0 mg/g upon shipment from storage to processing.
- Final storage temperature can be as low as 46°F for a mature, healthy crop.

Hibernate Potatoes (right) have protection against common U.S. Strains of late blight[2].

References: [1]Simplot Plant Sciences internal study, 2017. All plants were inoculated with late blight strain US-23. [2]Simplot Plant Sciences Field and Storage Trials conducted 2017-2020. [3]Agronomic Management Guidelines: of Hibernate Variety of Potatoes, Simplot Plat Sciences 2017. [4]Late Blight Integrated Pest Management Guide for Innate® Generation 2 Varieties, Simplot Plant Science, 2017. [5]Laboski, C.A.M. and Peters, J.B. Nutrient application guidelines for field, vegetable, and fruit crops in Wisconsin (A2809). Madison, Wisconsin: Board of Regents of the University of Wisconsin System, 2012.

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