

## Potato Test Selections for Tablestock Use

### Invention Summary

New tablestock potato selections that all show resistance to race Ro1 of the golden nematode, have few pickouts or external defects, and are either adapted to the local (NY, PA) or broader environments. These selections are for evaluation use.

### Technology Overview

The Cornell potato breeding program has developed new potato test selections that present great features for tablestock use:

**NY140** is a high yielding, lightly textured, white-skinned, late-season clone for both potato-chip and tablestock use. Its tubers are large and remain white after boiling and do not slough significantly. It is **resistant to blackspot bruise, resistant to both races Ro1 and Ro2** of the golden nematode and **moderately resistant to early and late blight**. It is susceptible to common scab. Its marketable yields have averaged 115% of the cultivar ‘Atlantic’ in Tompkins County, New York. Tuber dormancy is 6 weeks longer than for ‘Atlantic’.

**NY151** is a smooth white-skinned, late-season tablestock selection. It features tubers that do not darken and slough appreciably after boiling. NY151 is **resistant to race Ro1** of the golden nematode, and shows **moderate resistance to common scab**. It demonstrates a **good-yielding ability**, averaging 106% of the marketable yield of the cultivar ‘Atlantic’ in Tompkins County, New York. It shows a period of dormancy comparable to ‘Atlantic’.

**NY155** is a light pink-skinned early-season tablestock selection. It features large, uniform tubers that display an oblong, flattened shape with shallow eyes. Its tubers do not darken and slough appreciably after boiling. NY155 is **moderately resistant to common scab**. It demonstrates **good-yielding ability**, averaging 102% of ‘Chieftain’ marketable yield in Tompkins County, New York. NY155 tuber dormancy is about 2 weeks longer than for ‘Atlantic’.

Exp #	Scab Resistance	Golden Nematode Resistance	Yield <sup>1</sup>	Tuber dormancy <sup>2</sup>	Skin	Flesh	Tuber size	Maturity
NY140	Susceptible	Ro1, Ro2	115%	6 weeks	White	Do not darken or slough appreciably	Large	Late
NY151	Moderate	Ro1	106%	0 weeks	White, Smooth	Do not darken or slough appreciably	Mid-size	Late
NY155	Moderate	Unclear	102%	2 weeks	Light Pink with Shallow Eyes	Do not darken or slough appreciably	Large	Early

#### Inventors:

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#### Type:

Plant varieties

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#### Cornell Reference:

D-5150 (NY140)

D-6992 (NY151)

D-6678 (NY155)

<sup>1</sup> Yield compared to the marketable yield of the cultivar ‘Atlantic’ in Tompkins County, NY (compared to ‘Chieftain’ for NY155)

<sup>2</sup> Tuber dormancy compared to the cultivar ‘Atlantic’: number of additional weeks.

## Potential Applications

Potato selections suitable for the fresh market consumption.

## Advantages

- High yields, attractive appearance;
- Resistance to race 1 Ro1 of the golden nematode;
- A low frequency of pickouts due to knobs, misshapes and growth cracks, as well as a low level of internal defects;
- Adaptability to many growing areas and climate conditions.