CASTILE: A MULTIPLE-PURPOSE, HIGH YIELDING FULL-SEASON GOLDEN NEMATODE RESISTANT POTATO VARIETY

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Abstract

Castile is a golden nematode Race A (Globodera rostochiensis) resistant potato variety with the potential to produce high marketable yields of attractive tubers suitable for tablestock and processing. Tubers are oblong to long, slightly flattened with a smooth white skin and moderately shallow eyes. Vines of this variety are large, providing a dense canopy, and require a full growing season similar to that needed for Katahdin. Timely irrigation produces high marketable yields, stress conditions can limit yields. Specific gravity in New York State averages 0.005 above Katahdin and 0.009 below Atlantic. Tuber flesh is bright white. Baking and french fry quality is good. Chip color, when tubers are stored at 10 C for 120 days, is equivalent to Atlantic. Castile is resistant to corky ring spot, pinkeye, and moderately resistant to Fusarium rot.

Compendio

Castile es una variedad de papa resistente a la Raza A del nematodo dorado (Globodera rostochiensis) con potencial para producir rendimientos comerciales altos de tubérculos attractivos aptos para consumo directo y procesamiento. Los tubérculos son oblongos a alargados, ligeramente aplanados con piel lisa blanca y ojos moderadamente superficiales. Los tallos de esta variedad son largos, proveyendo una copa densa, y requieren una temporada de cultivo similar a la requerida por Katahdin. La irrigación oportuna produce un alto rendimiento comercial, las condiciones de estrés...
pueden limitar los rendimientos. La gravedad específica en el Estado de Nueva York promedia 0,005 por encima de Katahdin y 0,009 por debajo de Atlantic. La pulpa del tubérculo es blanca brillante. La calidad al horneado y en fritura a la francesa es buena. El color de la papa frita a la inglesa, cuando los tubérculos son almacenados a 10°C por 120 días, es equivalente al de Atlantic. Castile es resistente a la mancha corchosa en anillo, al ojo rosado y moderadamente resistente a la pudrición por *Fusarium*.

**Introduction**

Castile was produced by the USDA-ARS potato breeding project at Beltsville, MD. It came from a cross made in 1969 between the female parent Peconic and the male parent F107-30. It was first evaluated in the field in 1970 on the Chapman Farm near Presque Isle in Aroostook County, Maine as seedling number B7592-1. It has since been evaluated in small plot trials in Maine, New York, and other northeastern states. Since 1985, commercial scale plantings of this line in NYS have generated interest in its release due to its yielding ability and culinary quality. The name Castile is taken from a small agricultural community in western New York State where seed of this variety has been produced for commercial plantings. The pedigree is as follows:

![Pedigree diagram]

**Description**

*PLANTS: Maturity:* main season. *Vines:* medium to large, initially upright later spreading and providing excellent ground cover. *Stems:* medium green with slight purple coloring, most pigmentation occurs in nodal region, slightly pubescent. *Wings:* prominent, straight to slightly waved. *Nodes:* slightly swollen. *Stipules:* present, slightly pubescent. *Leaves:* medium to dark green (similar in color to Katahdin), slightly pubescent, relatively flat, on basal leaves terminal leaflets and one primary leaflet have a tendency to be fused while remaining leaves do not have this tendency. *Terminal leaflet:* medium large, mostly symmetrical, oval with acute tip and rounded, slightly cordate base: mean length 72.4±5.0 mm, mean width 40.6±3.5 mm, in-