Inbred Carrot Lines May Resist Root-Knot Pest

WARF: P120304US01

Inventors: Irwin Goldman

The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in carrot varieties having potential resistance to Northern root-knot nematode.

Overview

According to the USDA, Wisconsin farmers produced 73,610 tons of carrots in 2010. Unfortunately, carrot is highly susceptible to attack by the root-knot nematode (*Meloidogyne hapla* Chitwood), a pest that can severely reduce yields.

The Invention

UW–Madison researchers have developed inbred carrot lines that exhibit some resistance to Northern root-knot nematode. The two lines are [W261 x (Rotin x W259)] and [W77 x (Rotin x W259)]. The lines were identified via greenhouse screening tests in the presence of nematode infection. Genetic crosses indicated that resistance is conditioned by two different homozygous recessive genes.

Applications

- Genetic testing related to root-knot nematode resistance
- Potentially breeding a new commercial carrot line

Key Benefits

- Carrots show some resistance to Northern root-knot nematode.

Additional Information

For More Information About the Inventors

- Irwin Goldman

Related Technologies

- WARF reference number P01015US describes inbred carrot lines with superior resistance to aster yellows disease.

Publications

- Wang M. and Goldman I.L. 1996. Resistance to Root-Knot Nematode (Meloidogyne hapla Chitwood) in Carrot is Controlled by Two Recessive Genes. J. Hered. 37, 119-123.

Tech Fields

- Animals, Agriculture & Food : Plant varieties