

Golden Nematode Program Update

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In 2014, as a result of the combined efforts of the Growers, Cornell University, New York State Department of Agriculture and Markets and USDA, officials removed 600,524 acres from areas of New York which had been quarantined for Golden Nematode (GN) bringing the total area deregulated to 76%. This will benefit growers because shipments of potatoes and other crops are no longer subject to GN quarantine restrictions in these areas.

Decades of crop rotations using GN resistant varieties, sanitation of farm equipment, control treatments, and soil testing have resulted in the nematode no longer being present in areas which had been under quarantine for many years.

Soil surveys will continue to be conducted annually in potato production areas throughout New York to ensure agricultural land remains free from this nematode and to ensure early detection of possible redevelopment or new infestations. This past year (2014), 4,528 soil samples were collected from 1,959 acres in 15 counties.

In 2014, there were no detections of GN outside the quarantined area. There was one detection of GN on a previously infested field in upstate NY.

Control of GN is accomplished through strict sanitation to prevent soil movement from infested fields, and through crop rotations using resistant potato varieties and non-host crops. In 2014, State and federal personnel used high pressure washing and steam treatments on 1,744 pieces of used farm equipment to prevent spread of GN.

GN is primarily a pest of potato but tomato and eggplant are also host crops which should not be planted consecutively for multiple years.

The strain of GN which occurs in NY is known as Ro1. A variant of GN known as Ro2 has been detected in GN infested fields where multiple crops of GN resistant potato varieties were grown consecutively. Scientists at Cornell University are working diligently to develop potato varieties that have resistance to Ro2. The genetic composition of Ro2 is such that development of resistance is extremely difficult.

Weeds in the Solanaceae family such as the nightshades, Solanum species, can serve as alternate hosts for GN and should be eliminated from potato production areas.

The successful containment of GN in NY for over 70 years provides an opportunity for releasing land from regulatory control. Growers interested in this opportunity are encouraged to contact USDA APHIS or NY Department of Agriculture and Markets.

The Best Management Practices for dealing with GN are provided below as a reminder to producers and anyone dealing with this quarantine-significant nematode.

Best Management Practices to Prevent Spread of Soil-Borne Organisms Including Potato Cyst Nematodes

- Clean all machinery, trucks and other equipment when going from field to field. Do not allow any vehicles in fields unless the vehicles have been thoroughly cleaned.
- Do not spread tare soil or debris from potato processing operations or from storage filling/emptying operations on farm land or place it in an area where it can be spread to farm lands.
- Leave hedgerows, sod barriers or sod strips between fields and along highways.
- Grow non-host crops in rotations with potatoes and never plant GN susceptible potatoes back to back. Crops that are not hosts of GN include corn, small grains and alfalfa.
- Plant golden nematode resistant potato varieties in rotation with other crops.
- Do not plant potatoes, not even resistant varieties, back-to-back in fields in which GN has been detected.
- Plant cover crops as soon as possible when land is not in use to prevent GN spread by erosion.
- Segregate potatoes in storage—each field should have a definite separation.
- Do not use used bags, containers, etc. for potato transport, and be sure all commercial transport vehicles are free of soil.
- Do not permit temporary help, custom applicators, hunters or utility companies to bring their vehicles onto your farm land without proper sanitation and do not allow them to bring any equipment, bags, etc. with them to the field.
- Do not use common headlands, farm roads and public roads as turning areas.
- Prohibit non-authorized entry onto farmlands using “No Trespassing” signs.
- Do not assume that non-regulated fields are free of the pathogen.

Additional information is available at: <http://www.aphis.usda.gov/ppq/ispm/nematode/index.html> or by calling USDA APHIS at 607.566.7060 or the NY Dept. of Agriculture and Markets, Division of Plant Industry at 518.457.2087.