

The Historic Certified Seed Potato Area of Marshall county has been an integral part of Minnesota's seed potato certification program ever since its establishment in 1919. Minnesota has had an effective seed program due to the ability to isolate our basic and increase seed growing areas from the mainstream of commercial potato production.

The seed potato production process begins in the northern part of our state with one of the most unique potato growing areas in the United States known as the Primary Foundation Quarantine Area of Lake of the Woods county (see attached map). Potatoes grown in this area are closely scrutinized and only tubers from the strongest, healthiest, and most representative plants of each variety are maintained.

The progeny of this seed is traditionally sold to seed growers in Kittson and Marshall counties. These growers mass plant the seed for two to three years, producing large quantities of high quality seed potatoes to be sold to other seed or commercial operations in Minnesota and across the United States and Canada. Kittson and Marshall counties are commonly referred to as "The Foundation Seed Increase Area". Kittson and Marshall counties account for nearly one-half the certified seed acres in Minnesota. This amounts to approximately 12,500 acres equaling an estimated 2,500,000 hundred weight of high quality Foundation or Generation certified seed potatoes.

In 1990, the Minnesota legislature established the "Restricted seed potato growing area" which means Kittson county and required a study done on the "Historic certified seed potato area" which means "the portion of Marshall county included in the towns of Augsburg and Nelson Park that are north of Marshall county highway No. 5". The restriction means that "The seed potato certification requirements under section 21.111 to 21.122 apply to potatoes growing in plots of ten acres or more in the restricted seed potato growing area. Qualifying potatoes growing in the restricted seed potato growing area must be certified as seed potatoes". In the historic certified seed potato area of Marshall county, the Department of Agriculture must study the effect of diseases on seed potatoes, including the affect of diseases from commercial potatoes.

Since the middle 80's, many certified seed producing states including Minnesota, have been under attack by a disease called Potato Virus Y (PVY). PVY, though not new to our state, has increased sharply in the last seven years. Many factors play a role in this increase. A few such factors are, changes in weather patterns possibly bringing more disease spreading insects (mainly aphids) in on wind currents, the loss of certain insecticides that help combat these insects, and the importation of susceptible varieties like Shepody & Russet Norkotah. This disease (PVY) is mainly introduced by either planting infected tubers or by aphids that feed on infected tubers or by aphids that feed on infected plants and then move to adjacent lots or fields carrying the virus with them.

In 1985, 32% or 8,286 acres out of 25,614 acres entered for certification were infected with some level of PVY with the average number of plants per acre infected somewhere around four. By 1991 however, 69% or 17,467 acres out of 25,345 acres entered were infected and the average number of infected plants per acre has risen to 47.

Disease levels in the Historic Seed Potato Growing Area of Augsburg & Nelson Park Townships of Marshall county have risen at the same rate as in other areas of the state. Growers in these townships, on the average, plant and enter for certification around 1,150 acres of potatoes each year. Commercial potato production in this area has been limited to two years since 1985; 640 acres in 1990 and 100 acres in 1991. Given this short history, it is difficult to measure the exact impact that commercial production has had on disease levels in this area. Nevertheless, it is a long excepted practice to isolate seed potato growing areas from commercial production, given the nature of diseases like PVY and how quickly and efficiently they can spread from one field to another. Allowing the Historic Certified Seed Potato Area in Marshall county to merge with the Restricted Seed Potato Growing Area in Kittson, would strengthen Minnesota's potato industry and help protect it from disease epidemics.

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# MINNESOTA CERTIFIED SEED POTATO PRODUCTION AREAS

The map displays the state of Minnesota with its county boundaries. Shading patterns are used to denote specific production areas:

- Diagonal lines (top-left to bottom-right):** KITTSON, MARSHALL.
- Horizontal lines:** ROSEAU, BELTRAMI, KOOCHICHING, ITASCA.
- Vertical lines:** CLEARWATER, HUBBARD, CASS, AITKIN, MILLE LACS, KANABEC, BENTON, SHERBURNE, ANOKA, RAMSEY, HENNEPIN, CARVER, SIBLEY, SCOTT, LE SUEUR, RICE, GOODHUE, WABASHA, DODGE, OLMTED, WINONA, MOWER, FILLMORE, HOUSTON.
- Stippled pattern:** PENNINGTON, MED LAKE, HOFMANN, MAHONOMEN, BECKER, OTTER TAIL, WADENA, CROW WING, CARLTON, PINE, CHISAGO, WASHINGTON, DAKOTA, WASECA, STEELE, BLUE EARTH, WATONWAN, COTTONWOOD, MURRAY, PIPESTONE, ROCK, NOBLES, JACKSON, MARTIN, FARIBAULT, DEERBORN.
- White (unshaded):** LAKE OF THE WOODS, LAKE, COOK, VILLIKEN, GRANT, DOUGLAS, STEARNS, POPE, TRVERSE, BIG STONE, SWIFT, KANDIYOH, MEeker, WRIGHT, MCLEOD, RENVILLE, LAC QUI PARLE, YELLOW MEDICINE, LINCOLN, LYON, REDWOOD, NICOLLET, BROWN.

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  - Vertical lines:** LAKES OF THE WOODS.
  - Stippled pattern:** PENNINGTON, MED LAKE, CLEARWATER, HUBBARD, CASS, AITKEN, CARLTON, PINE, KANABEC, BENTON, SHERBURNE, ANOKA, WASHINGTON, RAMSEY, HENNEPIN, CARVER, SIBLEY, SCOTT, LE SUEUR, RICE, GOODHUE, WABASHA, WINONA, DODGE, OLMTED, MOWER, FILLMORE, HOUSTON, BLUE EARTH, WASECA, STEELE, WATONWAN, COTTONWOOD, MURRAY, PIPESTONE, ROCK, NOBLES, JACKSON, MARTIN, FARIBAULT, DEERBORN.
  - White (unshaded):** POCK, MAHOMEN, CLAY, BECKER, WADENA, CROW WING, OTTER TAIL, TODD, GRANT, DOUGLAS, STEARNS, POPE, TRVERSE, BIG STONE, SWIFT, KANDIYOH, MECKER, WRIGHT, MCLEOD, RENNVILLE, LAC QUI PARLE, YELLOW MEDICINE, LINCOLN, LYON, REDWOOD, NICOLLET, BROWN.