

ADVOCATE PROFILE

GROWER:

Dennis (*middle*) and
Greg (*right*) Iott

LOCATION:

Kalkaska, Michigan

RETAIL FACILITY:

Wilbur-Ellis

CROP ADVISOR:

Dale Dosenberry (*left*)

RETAILER LOCATION:

Eldmore, Michigan



Iott Seed Farm is a 1,350-acre operation producing seed potatoes for commercial chip growers and wheat, with remaining acres in rye, sorghum and sudangrass or other cover crops as part of a three-year rotation.

CROPPING SYSTEM GOALS:

Maximize production while utilizing technology to maximize the value of investment on each acre.

BEST MANAGEMENT PRACTICES IMPLEMENTED ON THE FARM:

- Fall soil sample on 2.5-acre grids every acre going into potato production
- Utilize Wilbur Ellis AgVerdict interactive field technology tool to evaluate fertility
- Utilize soil tests, yield maps and fertilizer budget to make fertility recommendations
- Use Super U or NDemand nitrogen stabilizer products to reduce nitrogen loss from leaching, denitrification and volatilization
- RTK autosteer for planting and hilling prevents root damage and uses water, land and nutrients efficiently
- Utilize split applications of fertility needs (pre-plant, starter, cultivation and subsequent application blends) based on timing of potato plant fertility needs
- Variable rate apply N, P, K, Mg, S, etc. to optimize nutrient placement
- Conduct weekly tissue sampling for each field and potato variety to evaluate in-season fertility needs during each critical stage of production
- Utilize cover crops including sorghum, sudangrass and rye on a three-year rotation to build organic matter and retain nutrients
- Weekly scouting to assess disease, pest and fertility issues
- Adequate sprayer capacity to address all issues on a timely basis
- Use of weather stations, disease prediction and heat units to anticipate disease and insect pressure
- All potato acres are irrigated; irrigation is carefully monitored; low pressure sprinklers for efficient water use and minimization of nutrient leaching

FORMS OF NUTRIENTS APPLIED:

Super U, NDemand, Epsom salts for magnesium, copper sulfate, boron, HiP, KTS, KMg

NUTRIENT USE EFFICIENCY:

By using grid sampling and weekly tissue tests, some plant nutrients are held back during “normal” planting and topdress operations. These nutrients are then added as needed during the growing season during weekly crop protection applications, which leads to increased nutrient use efficiency.

AVERAGE YIELD FOR EACH CROP:

Average yields over the past few years have increased since using 4R principles. Weather variability between growing seasons still has a large effect on potato yields. Overall yields have increased approximately 10%.

ECONOMIC MEASURE OF SAVINGS:

By focusing on 4R principles, two key successes have been achieved. First, in the past three to four years, annual yields are more uniform. Previously, annual yields could vary by 20%. Now, upper end yield goals are more consistent on all acres. Second, potato scab has been reduced. Properly balanced nutrition has helped minimize this disease detrimental to potato growers. Seed potatoes have a very high per acre cost of production. A few percentage points of yield make a big difference.