

Seed Production in Manitoba

PEI

February 2020

Our Farm

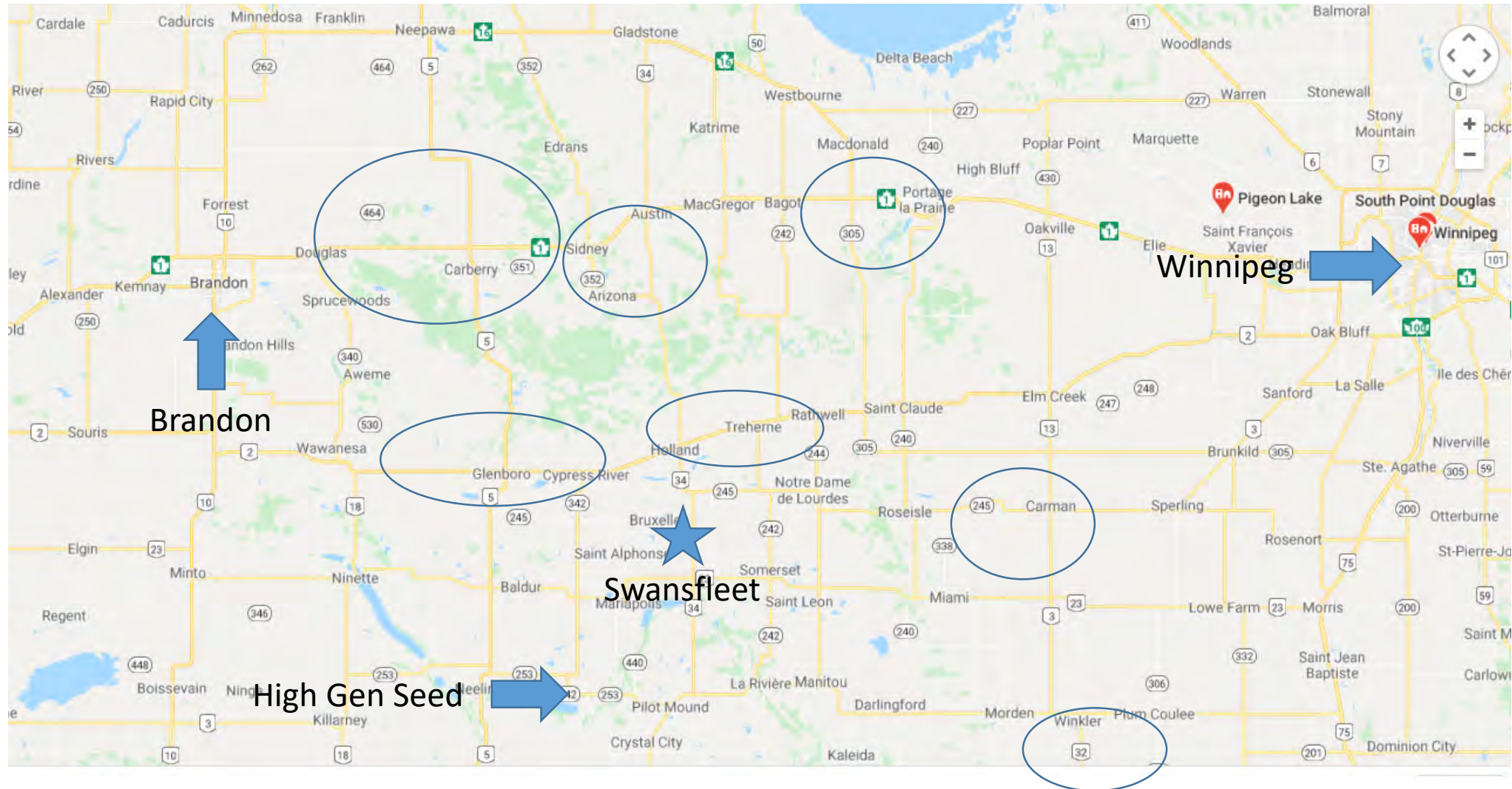
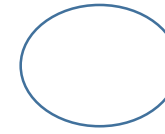
- Family operation
- Over 10 000 acres of production
- 2100 acres potato, 50/50 seed and processing
- Growing seed potatoes since 1976
- 100% irrigated potato production since 2013



Location

Legend

Commercial Production Areas



Manitoba Processing Industry

- McCain
 - Carberry and Portage factories
- Simplot
 - Expanded factory in Portage
- Variety Mix
 - Still mostly Russet Burbank 70%
 - Ranger Russet
 - Umatilla Russet
 - New Varieties
 - Innovator, Ivory, Dakota, Clearwater, Caribou



Manitoba Seed Industry

- Most process farms source locally
 - Balance from AB and SK
- 4 main seed growers, none are exclusive seed growers
- Mostly irrigated production
- Only a few process farms growing their own seed
- Seed Growers Association of Manitoba (SPGAM)
 - Price setting based on process contract (May 1 this year \$16.65 per cwt)
- Tightly controlled table industry



Future of Seed in Manitoba

- More variety direction from processors
 - Exclusive varieties more common
 - GMO?
- More seed from outside
 - Disease concerns (dikeya, clubroot)
- Contracts
 - Currently handshake agreements, working toward formal contracts
 - Need to incentivise seed production
 - Stability for seed growers
- More varieties means more complexity
 - Loss of storage space and more cleanout



Seed Production

- Isolated high generation
 - Start from mini tubers, 2 or 3 sources
- Commercial seed production beside process potatoes
- Entire farm certified
 - Flexibility in equipment and lot management
- Target selling E3 to customer
- Crate storage for high gen, bulk storage for commercial seed lots



Seed Challenges

- Aphids
 - Most years don't have significant pressure
 - Provincial monitoring program
- Late blight
 - Not every year, driven by weather
- Blackleg
 - biggest challenge lately
 - Harder to make grade since CFIA combined disease categories
- Weather
 - Early frosts and wet conditions



Disease Prevention

- Seed treatments
 - Reason for late blight
- In-furrow products
 - Soil Serenade for blackleg
- Rotation – 1 in 3 years is standard
- Mineral oil
 - Weekly application of 1L
- Weekly fungicide program
- Insecticide
 - Around or before desiccation/swathing of neighbouring crops, usually one or two applications per season
- Desiccation
 - Reglone twice (0.75 L each time, depending on vine health)
- Disinfection spray bar on seed cutter knives
 - Needs research but makes sense



Whole Seed Production

- Narrowing row spacing
 - Many process farms now at 34", some tighter
 - Bed planting for seed
 - 26" rows
 - Good for yield and size profile
 - Challenge to harvest
 - Smaller equipment
 - Increase in seed usage
- Growth regulators
 - Cytokinin, GA, combinations
- Fertility to enhance set
 - Phos products (alpine, crystal green)



More Agronomy

- Seed fertility 140-60-250-20 targeting 340 cwt net
- Process fertility 200-75-300-30 targeting 400 cwt net (Burbank)
- Seed spacing 34" rows at 8-9"
- Process spacing 34" rows at 13.5"
- Whole seed tends to be spaced slightly tighter for process – but does it have to be?
 - Needs to be managed differently from cut seed
 - Warming, 1,4-DMN for sprout control



Grading and Sorting

- Built current system in 2003
 - Designed for 1000 cwt/hour
 - Roughly \$1.5 million invested at the time (roughly half was equipment cost)
 - Low maintenance equipment from Dijkstra
- System
 - Shaker sizer
 - Seven roller tables
 - Three product flow lines
 - Two 72" cutters
 - Treating room with auger
 - 4 bunkers for finished product



Shaker Sizer

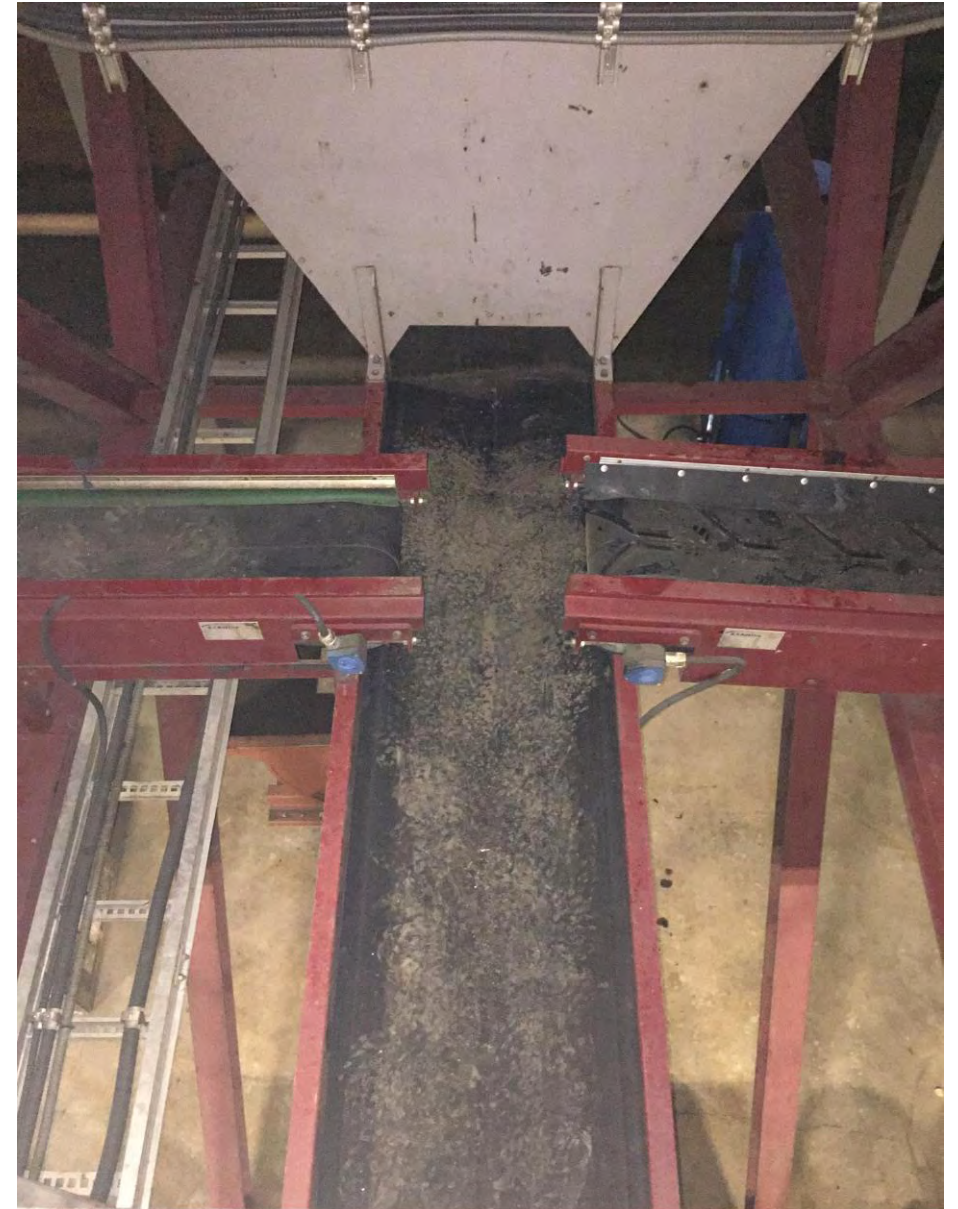
- Regular grade
 - 30 – 70 mm
- Whole seed (single drop)
 - 30 – 44 mm
- Screens and maintenance
 - Main cam bearings have been replaced several times
 - Smaller screens can plug
 - Very low maintenance overall



Screens



Sizer Discharge and Dirt



Size Splitting



Roller Tables



Product Lines



Treatment Room



Dust Application

- Douglas fir bark applied as a drying agent



Final Product Bunkers



Loading Trailers

- Load indoors
 - Semi with 50' van backs to piler
- Weighed as we load
 - Greentronics scale
- Drive-on scale outside once loaded



Future of Grading and Sorting

- Optical equipment
 - Need to replace manual labour – hard to find
 - Wages can justify equipment
- Shipping season compressed
- More whole seed
 - Different size categories



On Our Radar

- Seed age
 - Testing – brown paper bag for now
 - Want to make recommendations for seed spacing based on results
- Soil health and erosion prevention
 - Cover crops will become important
 - Finding the right test for benchmarking soil health
- Longer rotation
 - Maybe not necessary with healthy soil, may not be realistic with expanding acres in MB
- Automation in grading
- Increase harvest capacity – two wet cold harvests in a row
- Back to bed planting – different configuration more suitable to irrigated farming in MB



Discussion or Questions

Thanks for your time!



Don't Be a Stranger

Stop in next time you are in Manitoba to talk farming
Follow me on twitter @RussellJonk or email rjonk@hotmail.com
Visit our website www.swansfleet.com

