



S T E R M A N
M A S S E R
P O T A T O F A R M S

SUSTAINABILITY & STEWARDSHIP IN THE POTATO INDUSTRY

Last Food Mile Conference

December 8, 2014



FOOD WASTE REDUCTION AT SMI

- Introduce Sterman Masser, Inc.
- Present waste reduction practices
 - Precision agriculture and Practices
 - State-of-the-art facilities to handle potatoes
 - Processing facilities for the off grade
 - Maximizing environmental stewardship
- No potato left behind



OUR HISTORY

- 8 Generations of potato growing knowledge
- Incorporated in 1970
- Business in 1970
 - Farming 100 Acres
 - Shipping 7 million lbs of potatoes
- Historically doubled sales every 5 years



SMI TODAY

- Operating 3 facilities
- Over 300 Employees
- Shipping over 300 million lbs of potatoes annually
- 3.2 million 4 oz servings per day
- Logistics company with 18 tractors and trailers
- Farming of 4600 acres



REDUCED MILES TO MARKET

- Centralized to 30% of U.S. Potato Consumption

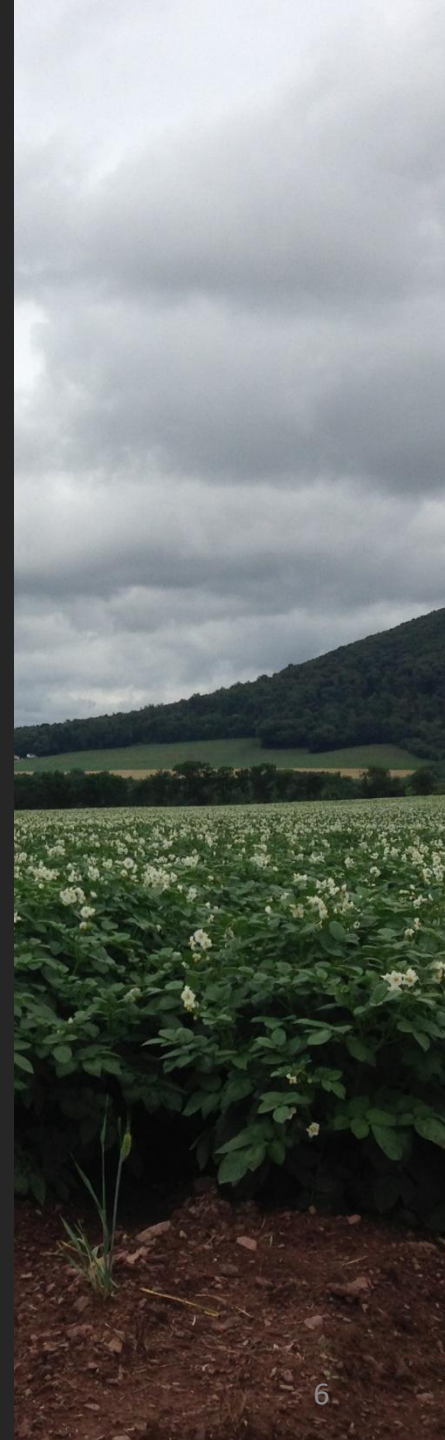




S T E R M A N
MASSEY
P O T A T O F A R M S

REDUCED FOOD WASTE BEGINS WITH:

PRECISION FARMING

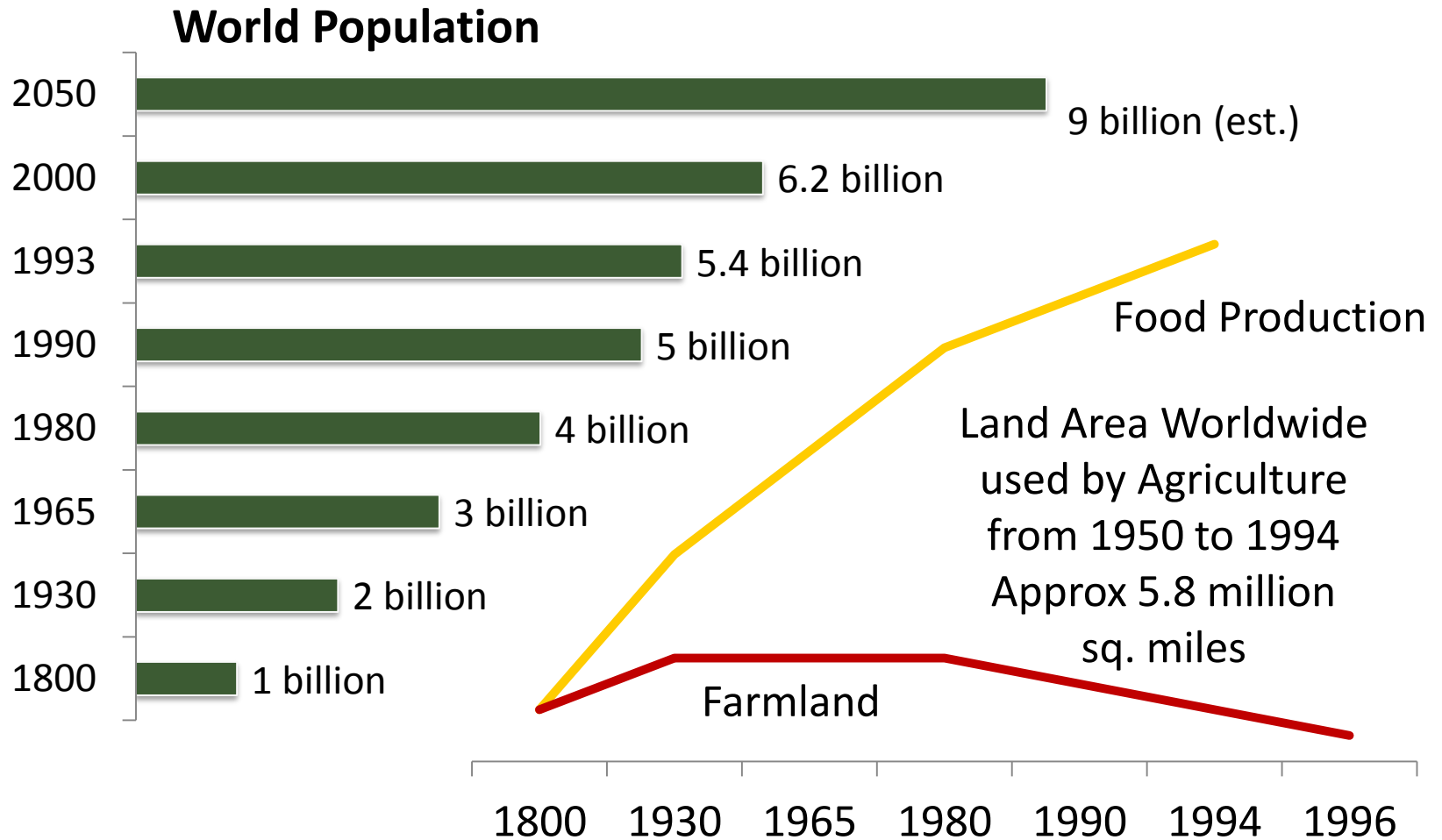


CONSERVATION IN PRACTICE

- Crop rotation and contour stripping for erosion control
- Low-pressure irrigation
- Integrated pest management
- GPS precision nutrient management
- 100% G.A.P. certified



GROWTH OF POPULATION VS. FARMLAND



MAKING THE MOST OF OUR LAND

- GPS systems for efficient field use
- Disease-resistant potato varieties
- Trading land to maximize potato ground
- Selecting well drained strips for potato production



INVESTING IN NEW TECHNOLOGY TO REDUCE DAMAGE/WASTE

- Advanced tillage implements
- Self propelled 4 row air sep harvester
- Rock crushing vs. rock removing





S T E R M A N
M A S S E R
P O T A T O F A R M S

ENVIRONMENTALLY CONTROLLED FACILITIES FOR WASTE REDUCTION



STORAGE FACILITIES

- Extended storage life and waste reduction
 - Temperature
 - Humidity
 - Light
 - Air flow
 - Sprout inhibitor

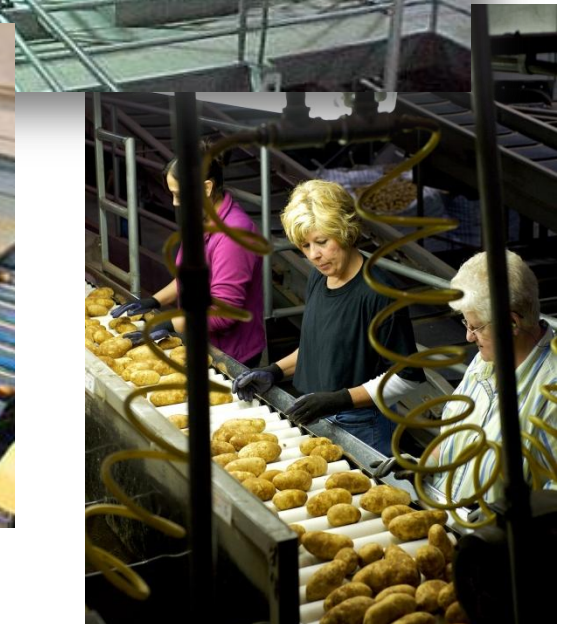




STATE-OF-THE-ART FRESH PACK FACILITIES

FRESH PACKING FACILITIES

- Bruise reduction
- Electronic and visual quality inspection



TODAY'S FRESH CONSUMER

- Visually appealing
- Fresh
- Value added
- Taste
- Varieties specific for the method of preparation



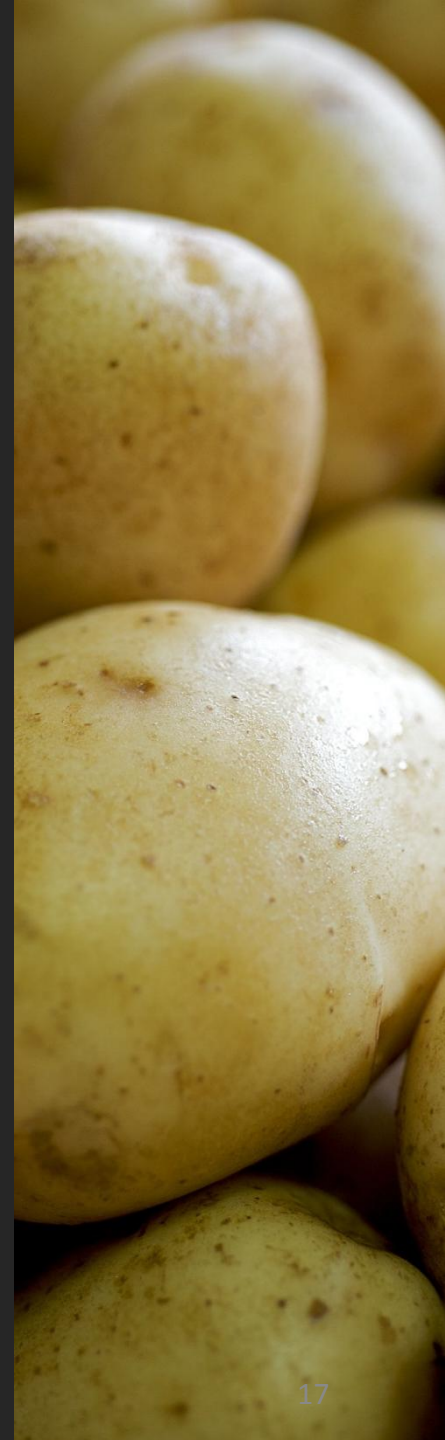
TODAY'S FRESH CONSUMER

- Quality standards are very high
- Small blemishes are removed for near perfect quality
- Every year presents a different challenge and can create more/less off-grade





PROCESSING OFF-GRADE PRODUCT



KEYSTONE POTATO PRODUCTS

- Dehydrated Potato Flake
 - Processing since 2005
- Fresh-cut Potatoes
 - Processing since 2007



KEYSTONE POTATO PRODUCTS

- Utilizes entire crop, extends shelf life, maintains nutrients
- Uses off-grade raw product
- Produces top-grade potato products
 - Potato Flake
 - Potato Flour
 - Cooked diced potatoes



KEYSTONE POTATO PRODUCTS

- Third dehy drum installed 2008
- Produces pet grade dehy from residual potato mash
- Over 10 million pounds finished dehy from 60 million pounds of mash since 2008



PEELINGS

- All peelings to cattle and pig feed uses
- 10 million pounds per year





MAXIMIZING ENVIRONMENTAL STEWARDSHIP



SOLAR FARM

- 8-acre array
- Produces over 1,100 MW annually
- Supplements 40% of facility energy requirements



FUEL EFFICIENT FLEET

- Wind drag reduction
- Auxiliary power units
- Increase efficiency by 1 mile/gal



ALTERNATIVE FUEL

- Adjacent landfill produces methane gas
- Used to fuel steam needed in dehydration process



WATER TREATMENT AND RETURN

- On site wastewater treatment plant
- Cleans acid mine water
 - Produces potable water
 - Used in potato processing
- Retreats used water
 - returns water to local watershed (meets new environmental standards)
- 25 million gallons/year



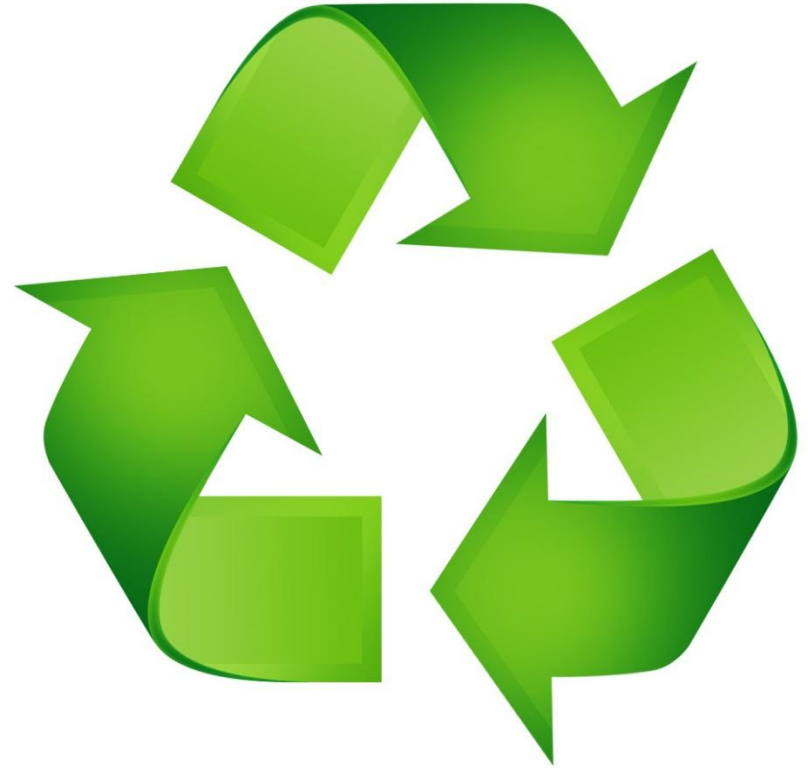
RESIDUAL DIRT RECYCLE

- Dirt from wash water filtered
- Collected and pressed
- Returned to farm land
- Over 100 tons/year



WASTE MANAGEMENT PROGRAM

- Comprehensive recycling
 - Metal wickets
 - Poly bags
 - Cardboard
- Convert broken pallets to mulch





S T E R M A N
M A S S E R
P O T A T O F A R M S

NO POTATO LEFT BEHIND



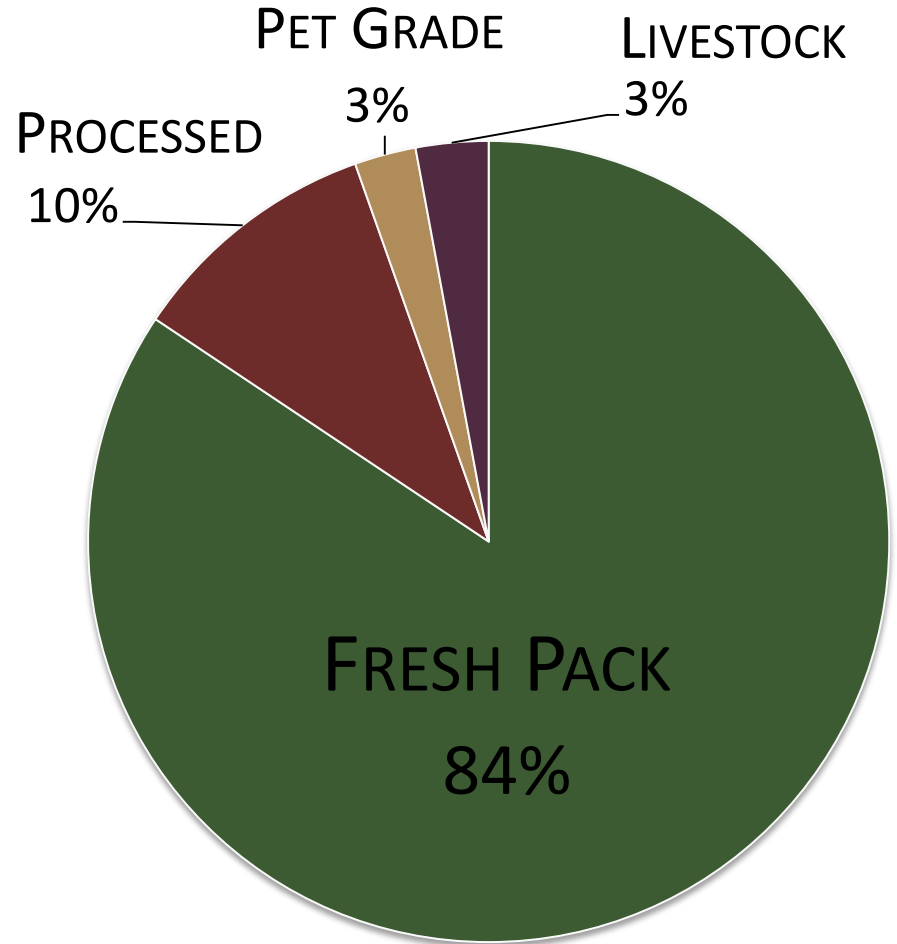
SCENARIO OF 2011

- 15" of rain on 300 acres
- Created poor quality and volatility
- Harvested and processed acreage for Dehy creating value



UTILIZING EVERY POTATO

- Maximize product for human consumption
 - 84% Fresh Pack
 - 10% Processed
- Pet grade flake
- Peelings and other waste used for livestock feed





S T E R M A N
M A S S E R
P O T A T O F A R M S

THANK YOU

