



# Selling Genetically Modified Potatoes in the United States:

## Lessons from the Innate<sup>®</sup> Potato

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CROP Innovation and Business Conference





# A History of Innovation

J.R. Simplot pioneered a culture of innovation; noted for first frozen French Fries.

## BRINGING EARTH'S RESOURCES TO LIFE



## SILENCED PPO (ENZYME)

- Non-browning when cut
- Reduced black spot bruise

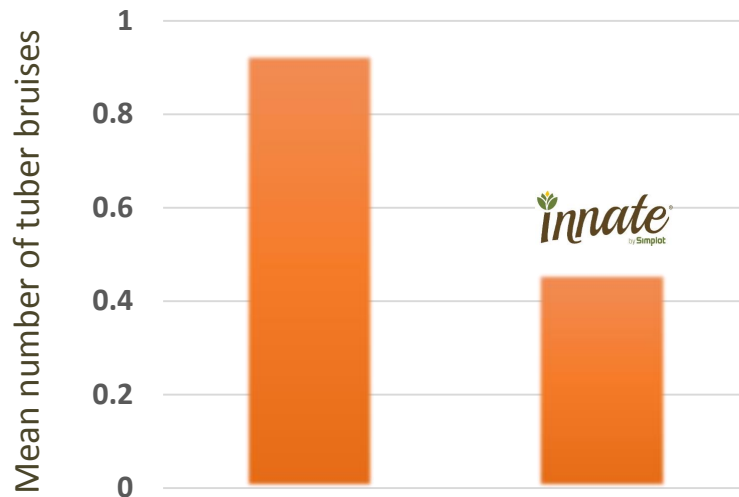


## REDUCED ASPARAGINE (AMINO ACID)

- Yields a 50-80% reduction in acrylamide when baked or fried

## FOUR IMPROVED VARIETIES

- Russet Burbank
- Ranger Russet
- Atlantic
- Snowden





# Potato Traits

## LOW COLD SWEETENING

- Resistance to field stress
- Quality fries and crisps from cold storage

## LATE BLIGHT RESISTANCE

- Robust resistance against all known strains in the USA/Canada

## FOUR IMPROVED VARIETIES

- Russet Burbank
- Ranger Russet
- Atlantic
- Snowden



DEREGULATED IN US & CANADA



# US Potato Facts

- Compared to row crops—few hectares grown (400,000 ha)
- Commodity volumes-low margins
- NatureMark failed publicly
- Deregulation costs about \$15 mil



# US Potato Industry Sectors



Frozen

40% of volume



Fresh

26% of volume



Chips

15% of volume



Dehydrated

11% of volume

# US Potato Industry Sectors



## Frozen

Four russeted varieties own market



## Fresh

Reds, whites, yellows & russets



## Chips

Two varieties own 40% of market



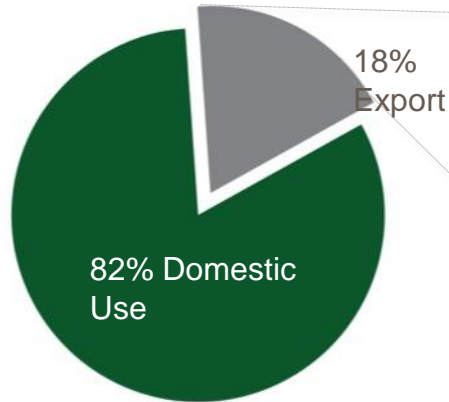
## Dehydrated

Outlet for Frozen & Fresh off-grade



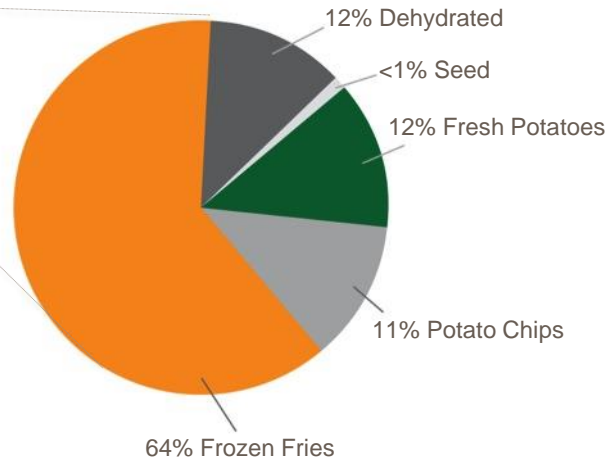
# U.S. Market Assessment

**U.S. Consumption is 82%  
of U.S. Production**



**Export is ~18% of  
U.S. Production**

Market Share of Exported  
U.S. Potatoes



Source: National Potato Council, 2015

## Top 10 Export Markets

|    |              |               |
|----|--------------|---------------|
| 1  | Japan        | \$348 million |
| 2  | Canada       | \$333 million |
| 3  | Mexico       | \$217 million |
| 4  | China        | \$113 million |
| 5  | South Korea  | \$97 million  |
| 6  | Philippines  | \$68 million  |
| 7  | Taiwan       | \$60 million  |
| 8  | Malaysia     | \$56 million  |
| 9  | Saudi Arabia | \$41 million  |
| 10 | Hong Kong    | \$39 million  |

Source: Department of Commerce, U.S.  
Census Bureau, Foreign Trade Statistics



# Sectors of success



Frozen

40% of volume



Fresh

- Only branded biotech produce item in US groceries
- Selling in groceries across US for 2 years without hysteria
- Seeking growers and retailers in Canada



Chips

- Regional chippers (not PepsiCo/Frito Lay) seeing big returns
- Number of acres and number of growers increases annually
- Seeking growers and retailers in Canada



Dehydrated

11% of volume

# Why we aren't in the Frozen sector

- Once bitten, twice shy
- Public relations threat to big name brands
  - e. g. McDonalds
- Threat to international trade
- All French fry plants at capacity



# Fresh Potato Sector--USA

## Top grade fresh potato channels

Food Service (Sysco)

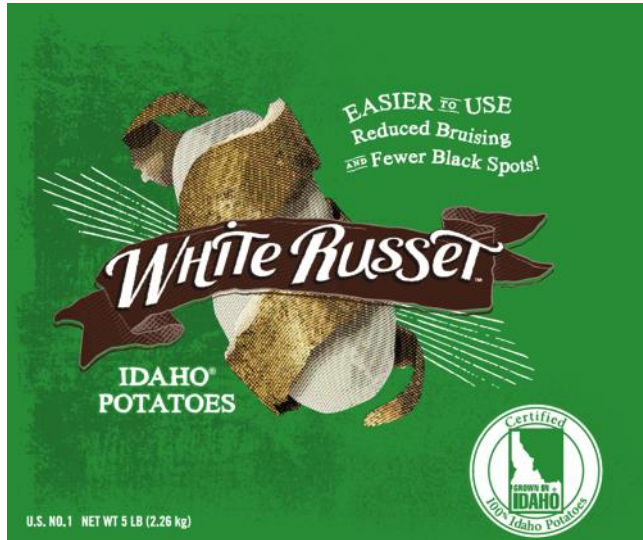
Retailers (Walmart, Safeway, Kroger, etc)



- Retailers are expected to pay more for better quality and fewer rejections due to bruise. Consumer price may stay the same.
- Food Service companies are expected to pay for quality and “stay white” convenience, especially late storage season.



# Fresh Potato Sector—White Russet™



**EASIER TO USE**  
Reduced Bruising  
Fewer Black Spots!

**White Russet**

IDAHO POTATOES

Certified  
IDAHO  
100% Idaho Potatoes

U.S. NO. 1 NET WT 5 LB (2.26 kg)




**White Russet**  
POTATOES

Proudly raised in the heart of potato country, these special White Russet™ potatoes stay fresher-looking longer-so they're easy to enjoy and there's less waste, too!

Our farmers use tried and true agricultural techniques to grow a better potato from seeds that contain the strongest traits of wild and domestic varieties. That means they're less vulnerable to bruising and black spots and will stay white longer when cut or peeled, so you don't have to work so hard to reap the goodness of a potato that's better through-and-through!

[www.whiterusset.com](http://www.whiterusset.com)

**Nutrition Facts**  
Serving Size 1 medium potato (148g/5.2 oz)  
Servings Per Container about 15

| Amount Per Serving            | Calories 110                     | Calories from Fat 0 |
|-------------------------------|----------------------------------|---------------------|
|                               | % Daily Value*                   |                     |
| <b>Total Fat</b> 0g           | 0%                               |                     |
| <b>Saturated Fat</b> 0g       | 0%                               |                     |
| <b>Trans Fat</b> 0g           |                                  |                     |
| <b>Sodium</b> 0mg             | 0%                               |                     |
| <b>Potassium</b> 620mg        | 19%                              |                     |
| <b>Total Carbohydrate</b> 26g | 9%                               |                     |
| <b>Dietary Fiber</b> 2g       | 8%                               |                     |
| <b>Sugars</b> 1g              |                                  |                     |
| <b>Protein</b> 3g             |                                  |                     |
| <b>Vitamin A</b> 0%           | <b>Vitamin C</b> 45%             |                     |
| <b>Calcium</b> 2%             | <b>Iron</b> 6%                   |                     |
| <b>Thiamin</b> 8%             | <b>Riboflavin</b> 2%             |                     |
| <b>Niacin</b> 8%              | <b>Vitamin B<sub>6</sub></b> 10% |                     |
| <b>Folate</b> 6%              | <b>Phosphorus</b> 6%             |                     |
| <b>Zinc</b> 2%                | <b>Magnesium</b> 6%              |                     |
| <b>Copper</b> 4%              |                                  |                     |

\*Percent Daily Values are based on a diet of other people's secrets.  
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POTATO PRODUCE L.L.C.  
PASCO, WA 99301  
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For any questions or comments about our products, call toll-free 1.800.357.8765.

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POTATOES STORE BEST IN A DARK, DRY AND WELL VENTILATED AREA. OPTIMUM TEMPERATURE: 40° - 50°

10524-01





**White Russet**  
POTATOES

**Waste Less. Eat More.**  
Up to 44% reduction in bruising\*

The White Russet™

The Conventional Russet

# Fresh Potato Sector--USA

## Low grade fresh channels

✓ Salad

Dehydrated flake and granules

Animal foods

✓ 'Fresh cut' (refrigerated fresh)







# Fresh Cut



Natural browning time course



No Additives, No Preservatives  
Just potatoes



# Chips Sector-USA



Private Breeding

- + Custom Selection
- + Proprietary Seed

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***Continuous Advantaged Pipeline***

New Variety Every 2-3 Years



Public Breeding

- + Public Selection
- + Public Seed

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***Seeking genetics advantage***

Embracing Innate® Potatoes



# THANK YOU

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