"The Greatest Man You've Never Heard Of"

REGIONAL GREATS

- Does where you are from have an impact?
- Is it a positive one?
- Does your regional heritage still matter today?
- At the end of the session, can you point out a place where you see Bryan's regional roots showing through



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- Most Americans couldn't pick him out of a line up

- Never heard of him?
- The Atlantic Monthly in 1997 said that "Norman Borlaug has already saved more lives than anyone who has ever lived."



 Named by TIME Magazine as one of the 100 most influential minds of the 20th century



Iowa Farm Boy

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- "He is one of just six people to win the Nobel Peace Prize, the Congressional Gold Medal and the Presidential Medal of Freedom. And he is scarcely known in his own country."





Born in 1914 to Norwegian-American parents outside Cresco, Iowa

"His boyhood was spent on a Norman Rockwell-esque farm, where he had indelibly etched on his psyche the value of hard work, first by his parents, and later by his teachers and mentors."

1919-1932

Education: One room school house



1919-1932

"A community of immigrants"
 (Norwegians, Czechs, Bohemians) all working together...



AFTER HIGH SCHOOL...?

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 - Saw foreclosures, displacements, and read of near insurrections in the farming community
 - Saw how the new roads network improved the lives of all rural families -- farmers with new markets, access to health care, education, etc

WORKING THROUGH SCHOOL Grandfather persuaded Norman that college was important.

Attended college at the University of Minnesota -- thanks to hard work, as a farm laborer, saving money to attend.

SCHOLARSHIP!

- Occasionally he had to drop out to work to earn money
- But a Wrestling scholarship helped him pay the tuition



EXTRA PERKS OF THE JOB

 It was working at a coffee shop that he met his future wife Margaret



GRADUATION

 He had a job waiting – but in the tight federal budget, it would not be funded for another 6 months.

GRADUATION?

 He attended a lecture by Dr. Elvin Stakman, which changed Borlaug's destiny – and that of perhaps a billion others.



STAKMAN'S CHALLENGE

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Stakman ended his discourse with a moving charge that it was science which would "...go further than has ever been possible to eradicate the miseries of hunger and starvation from this earth." Norman Borlaug was hooked.

- U.S. Vice President Henry Wallace was instrumental in persuading the Rockefeller Foundation to work with the Mexican government in agricultural development.
- The Rockefeller people turned to Dr. Stakman.
- Stakman called Borlaug, who after graduation was working on government-mandated wartime service work at DuPont, who wanted to hire Borlaug when his service work expired.

 He accepted the offer to join a fledgling research project being initiated by the Rockefeller Foundation in rural Mexico.



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- Convincing subsistence farmers to trust a college boy was tough work.
- And time was not his friend harvests were falling, and people were literally starving.

 Vice President **Henry Wallace** on a visit to in the 1940s, where he said jokingly to Dr. Borlaug, "What's a good lowa boy like you doing working on wheat?"





 When Borlaug arrived in Mexico, its farmers raised less than half of the wheat necessary to meet the demands of the population. Rust perennially ruined or diminished the harvest. . . .

 Borlaug labored for 13 years before he and his team of agricultural scientists developed a disease resistant wheat.

THE 'TWO SEASON' WHEAT

To gain time, Borlaug and his team would rush seeds to southern Mexico where it was possible to carry out a second growing season each year.

- Borlaug first solved the rust issue.
- Then increased the yield.
- But then...

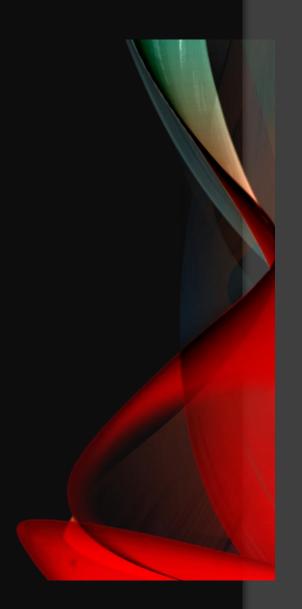
 The new wheat variety he had developed increased yields and resisted rust, but it did not have stems strong enough to hold the now heavy heads of grain. Plants would topple over in the wind and rain.

Finally, he added dwarf plants to the mix – and

The results were as astonishing as they had been difficult to attain.

Aided by the use of fertilizer and irrigation, Borlaug's new wheat varieties enabled Mexico to achieve self-sufficiency in 1956.

His belief in scientific research and a hands-on connection to the farmers paid off in what was considered an agricultural miracle.



ASIA & MIDDLE EAST

 Inspired by his breakthrough achievements, the UN Food and Agriculture Organization and the Rockefeller Foundation asked Borlaug to turn his attention to the Middle East and South Asia. The problem of extreme poverty and failing harvests afflicted not only Mexico, but also much of the developing world, and was exacerbated by the post-war population explosion.

 in the immediate aftermath of World War II, famine and the prospect of mass starvation haunted the Indian sub-continent and other parts of the globe.

• Think Mexico was tough – imagine trying to bring India and Pakistan together on this effort.

"I WENT TO BED THINKING IT WAS SOLVED, AND WOKE UP IN A WAR."

 His work in Pakistan was frustrated by so many things rules, regulations, riots – and wars.

In January, 1968, predictions were:

- Famine was a given, not a possibility.
- India, Pakistan, and the rest would NEVER feed themselves.
- Hunger was a given, and no one thought it possible to avert tragedies.
- Thus, NO government was involved in giving money to try to stop 'the inevitable.'

RESULTS

- In Pakistan, wheat yields nearly doubled, from 4.6 million tons in 1965 to 7.3 million tons in 1970; **Pakistan was self-sufficient in wheat production by 1968.** Yields were over 21 million tons by 2000.
- In India, yields increased from 12.3 million tons in 1965 to 20.1 million tons in 1970. By 1974, India was self-sufficient in the production of all cereals.

 But, much of the developing world was pulled back from the precipice of enormous human tragedy by the scientific pioneers who promulgated the Green Revolution. Leading them was Dr. Norman Borlaug, and the young agricultural scientists he had trained outside Mexico City.



 By increasing crop yields in Pakistan and India fourfold, those traditionally food deficit countries became selfsufficient in an amazingly short time, saving hundreds of millions of lives.

 Beginning in the early 1960's, his approach to wheat breeding was introduced in Egypt, Tunisia, Syria, Iran, Libya, Jordan, Lebanon, Turkey, Iraq, Afghanistan, Algeria and Saudi Arabia

Borlaug's successes in wheat were quickly replicated in other grains, most notably rice, by scientists such as M.S. Swaminathan in India, and Robert Chandler, Henry "Hank" Beachell and Gurdev Khush at the International Rice Research Institute in the Philippines. Together, with countless others, they helped avert famine and starvation in much of the developing world in the second half of the 20th century.

- Test case:
- "1968 when this new "miracle rice" from the Philippines arrived. Its impact in the eight villages in which I worked was as stunning as it was immediate. The four villages that were accessible by road experienced dramatic improvements, both in terms of nutrition and the well being of the people. New IR-8 rice spread rapidly as peasant farmers with small plots were suddenly able to experience both increased yields and double crops. This in turn led to tangible improvements in the quality of life: child mortality dropped; malnutrition abated; and children, especially girls, stayed in school longer."

- "At the same time, there was a rapid corresponding decrease in the level of armed conflict and military hostilities. It was as though the combination of new roads and new rice seed caused the roots of violent extremism to wither and disappear in a way that military action alone could not."
- Flip side: By contrast, the four other villages, with no bridges and no road access, remained mired in poverty: the new "miracle seeds" were not put to use; children remained stunted; and warfare and political dissidence continued there unabated.

 This experience seemed to confirm one of the central lessons of Norman Borlaug's boyhood – the ability of agricultural innovation and rural roads to dramatically change social conditions.

 Dr. Norman Borlaug was presented the Nobel Peace Prize in 1970 for his accomplishments in India and Pakistan and for his role as "Father of the Green Revolution."

• It is indicative of the kind of person he is that when, on October 20, 1970, the phone call came to advise him of his selection as the Laureate, Norm was in a remote farm field in Mexico.

 His daughter drove hours to reach him, since they needed to speak to him.

His answer?

 'He didn't see how he could possibly come to speak on the phone since he and his assistants still had much more work to do.'

 Borlaug stressed that the agricultural breakthrough achievements for which he was being honored were "only providing a brief window of time during which the world must confront the specter of a burgeoning world population which would have to be fed."

PUSHBACK

- But success is never free of challenges.
- By the 1990s, 'green' groups were the norm —and they pushed against the actions in Africa due to the need for petroleum-based fertilizers.
- Borlaug's response?

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- By the 1990s, 'green' groups were the norm —and they pushed against the actions in Africa due to the need for petroleum-based fertilizers.

"These elites have never felt the pangs of hunger. If they stopped lobbing from skyscrapers and lived in the field with starving people, they'd be screaming for tractors and fertilizer."

 By 1990, Borlaug still worked, ran the institute in Mexico, and taught at Texas A&M. But in his mind, he was 'retired.'

Rockefeller would no longer take his calls.

The World Bank stopped funding projects.

- Two other 'old guys' refused to let him rest.
- In 1984, during the Ethiopian famine, Ryoichi Sasakawa, the chairman of the Japan Shipbuilding Industry Foundation (now the Nippon Foundation), contacted the semi-retired Borlaug, wondering why the methods used in Asia were not extended to Africa.

- Two other 'old guys' refused to let him rest.
- To get the 'seed money' they turned to a charity that had been very active in Africa wiping out disease – the Carter Center - and Jimmy Carter said, 'of course.'
- Yields of maize in developed African countries tripled within a year.

- His leadership with former President (and fellow Nobel Peace Prize Laureate) Jimmy Carter and The Carter Center, of The Sasakawa Global 2000 Program, which has promoted the production of Quality Protein Maize in sub-Saharan Africa, countering Marasmus and Kwashiorkor, and other forms of acute malnutrition for millions of at-risk children;
- The founding of the World Food Prize which exists to recognize and inspire Nobel-like achievements in food and agriculture;
- His 30-year relationship with China as that country's agriculture was transformed, and;
- His prodigious efforts to educate the next generation of students and leaders on the crucial importance of world hunger and food security.

THE CHALLENGES GOING FORWARD

- almost all young Americans are physically removed from farming, the relationship with food production is no longer understood.
- Needed investment in rural infrastructure (particularly roads and bridges)
- Fear of the unknown: "we must rely on science and research to answer the questions about whether GMO foods pose any environmental risks."
- the declining trend in support for public agricultural research

 When speaking to young people in the early years of the 21st Century, Borlaug often quoted Thomas Jefferson as rhetorically asking whether:

"Ease and security – were these the drugs that abated the eternal challenge of the minds of men?...Did nations like men become lethargic when well fed and bodily comfortable?"

- Borlaug pointed out that with the earth's population increasing exponentially, "Either we significantly increase yields on the land now in production, or we plow under the remaining rainforests and other habitats to have more land to farm."
- He mused that he may be saving more trees as a plant pathologist than he even would have as a forest ranger!

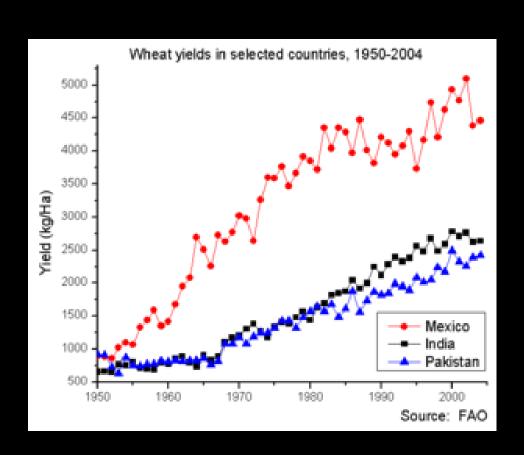
- "Borlaug remains the only agricultural scientist ever to receive the Nobel Peace Prize, and one of its least known recipients. I recall reflecting as he sat among many other laureates for the 100th Anniversary "class picture," that it was ironic that his name would be so little recognized, since compared to the other, more celebrated honorees, he had probably saved more lives than all of them put together." –
- Ambassador Kenneth M. Quinn, PhD President, The World Food Prize Foundation

TRIBUTE

• Dr. Borlaug passed in 2009.

He is credited with saving over a billion lives.

And no one in his home country could have picked him out of a police lineup.



YOUR THOUGHTS?

Things to Consider:

- 1 How is it we don't know this person?
- 2 Was Borlaug right and the later 'greens' have it wrong?
- 3 We know Borlaug changed the world, and is honored with statues in numerous different countries. Did he have a lasting influence on our region? On our country?

REGIONAL GREATS

This is the 7th 'Regional Great' we have studied:

- Harry Hopkins
- Henry Wallace
- Lou Hoover
- George Norris
- Susan LaFlesche
- William Jennings Bryan
- Norman Borlaug

REGIONAL GREATS

Do you have a favorite?

Any surprising facts you learned?

- Harry Hopkins
- Henry Wallace
- Lou Hoover
- George Norris
- Susan LaFlesche
- William Jennings Bryan
- Norman Borlaug

AND ...

CV for Russell Gifford, as of November 2017

This ends my 14th
year teaching at
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