

INNOVATION AS A PART OF SUSTAINABILITY

David Green | April 13, 2016

www.thesustainabilityalliance.us



Photo Courtesy
of Alaska Seafood.

**U.S.
SUSTAIN
ABILITY**

THIS IS HOW WE GROW

U.S. Sustainability Alliance – Our Partners



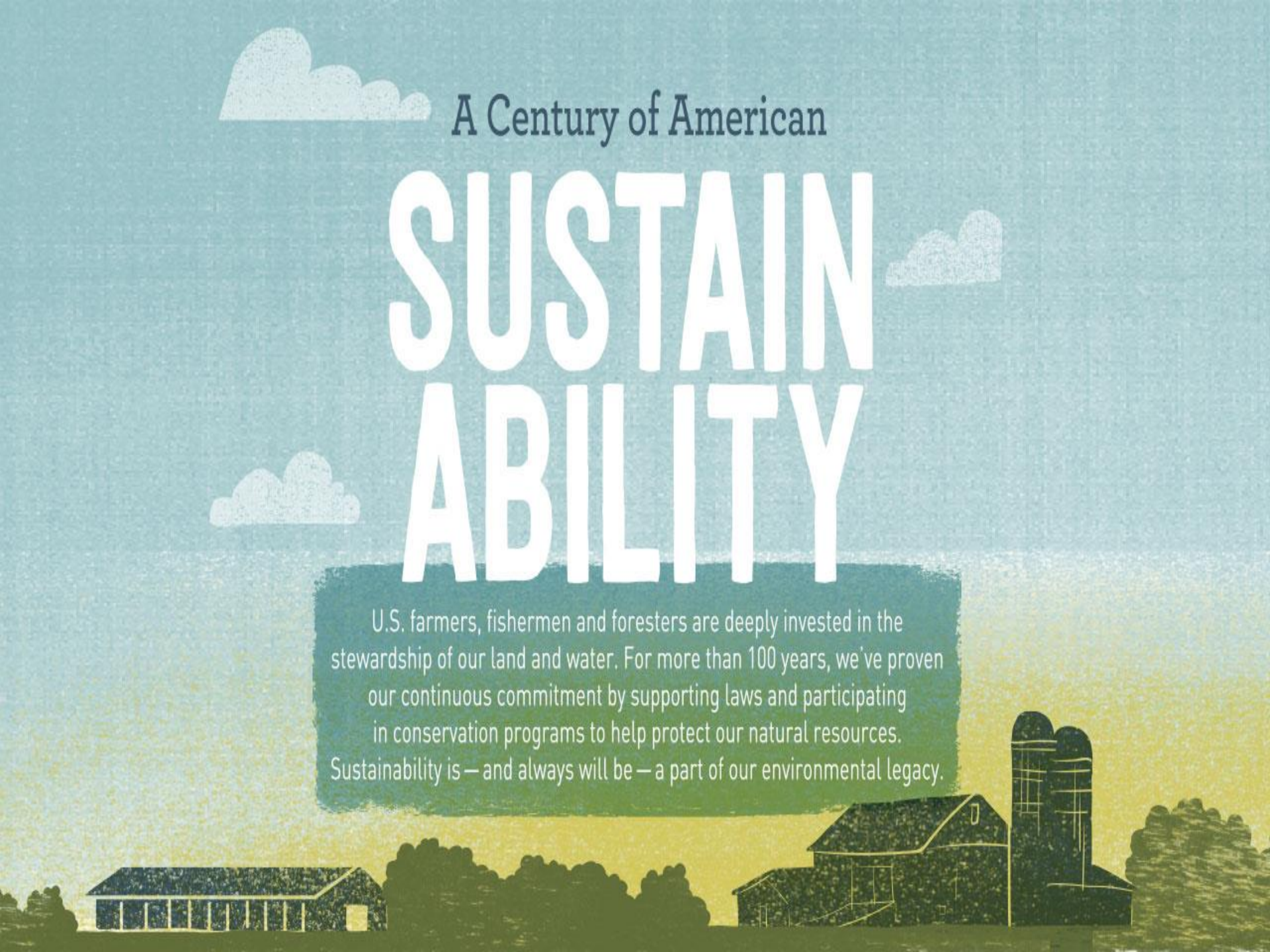
**U.S.
SUSTAINABILITY**
THIS IS HOW WE GROW



Linking the individual sustainability accomplishments of U.S. agriculture, forestry and fisheries through the long history of conservation stewardship.

**U.S.
SUSTAIN
ABILITY**

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A Century of American

SUSTAINABILITY

U.S. farmers, fishermen and foresters are deeply invested in the stewardship of our land and water. For more than 100 years, we've proven our continuous commitment by supporting laws and participating in conservation programs to help protect our natural resources. Sustainability is — and always will be — a part of our environmental legacy.

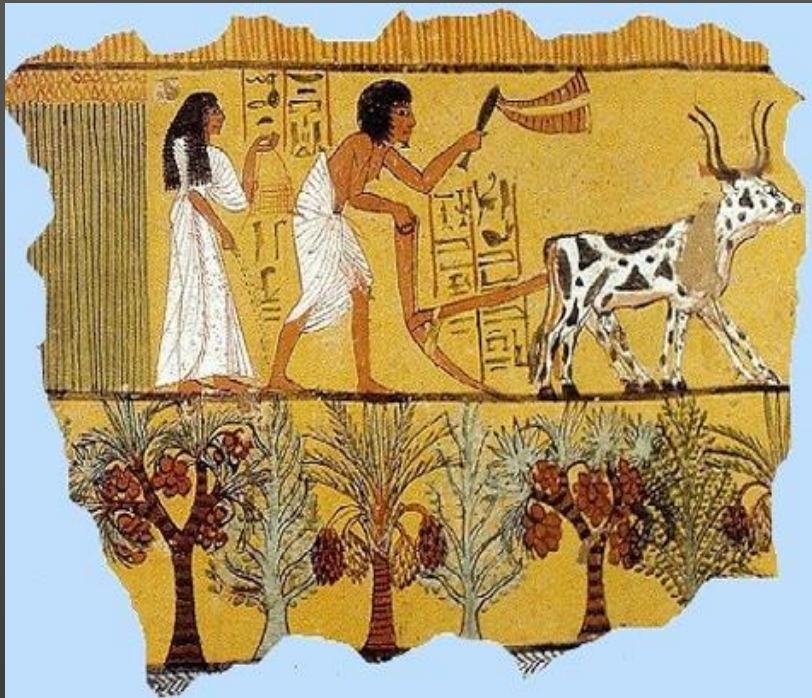


INNOVATION AND FARMING

“There are no miracles in agricultural production.”

Dr. Norman Borlaug

INNOVATION AND FARMING



For thousands of years farmers have looked for better ways to grow their crops, to adapt production to cope with changing climate and production conditions



This excavated farmhouse in northern Israel dated to 1200BC and had grain stores and early farm tools

INNOVATION AND FARMING



In 2014, Cambridge University archaeologists find an irrigation system dating to 70 AD

Used for growing grapes or asparagus

INNOVATION AND FARMING

Who uses Artificial Insemination?

Current Status of US Industry

- Dairy Cattle - 7 million (50%)
- Beef Cattle - 1.3 million (3%)
- Swine - 20 - 30%
- Turkey - 100%
- Horses - Increasing rapidly



Compilation: AECD, California || For more Veterinary stuff visit <http://www.techyvety.com>



As technology became more apparent so too did concerns about its application. AI in the 1930s in England was condemned in church sermons & female secretaries were barred from taking dictation because the subject matter was 'unseemly'



The post-WWII introduction of chemical pesticides revolutionized farming but brought increased concerns about their use and the impact on the environment



INNOVATION AND FARMING

Who owns the data?



Genetically modified crops also hailed as one of the greatest technologies to help farmers be even more sustainable has been vilified by uninformed and misguided attacks



INNOVATION AND FARMING: WHAT NEXT?



The virtual farm at the USA at EXPO Milano 2015 is being replicated in large areas in New York City



What will be the next bright idea in crop technology – how will it be adapted – what will be the challenges

INNOVATION AND FARMING

Risks/Costs of Technological Innovation

VS.

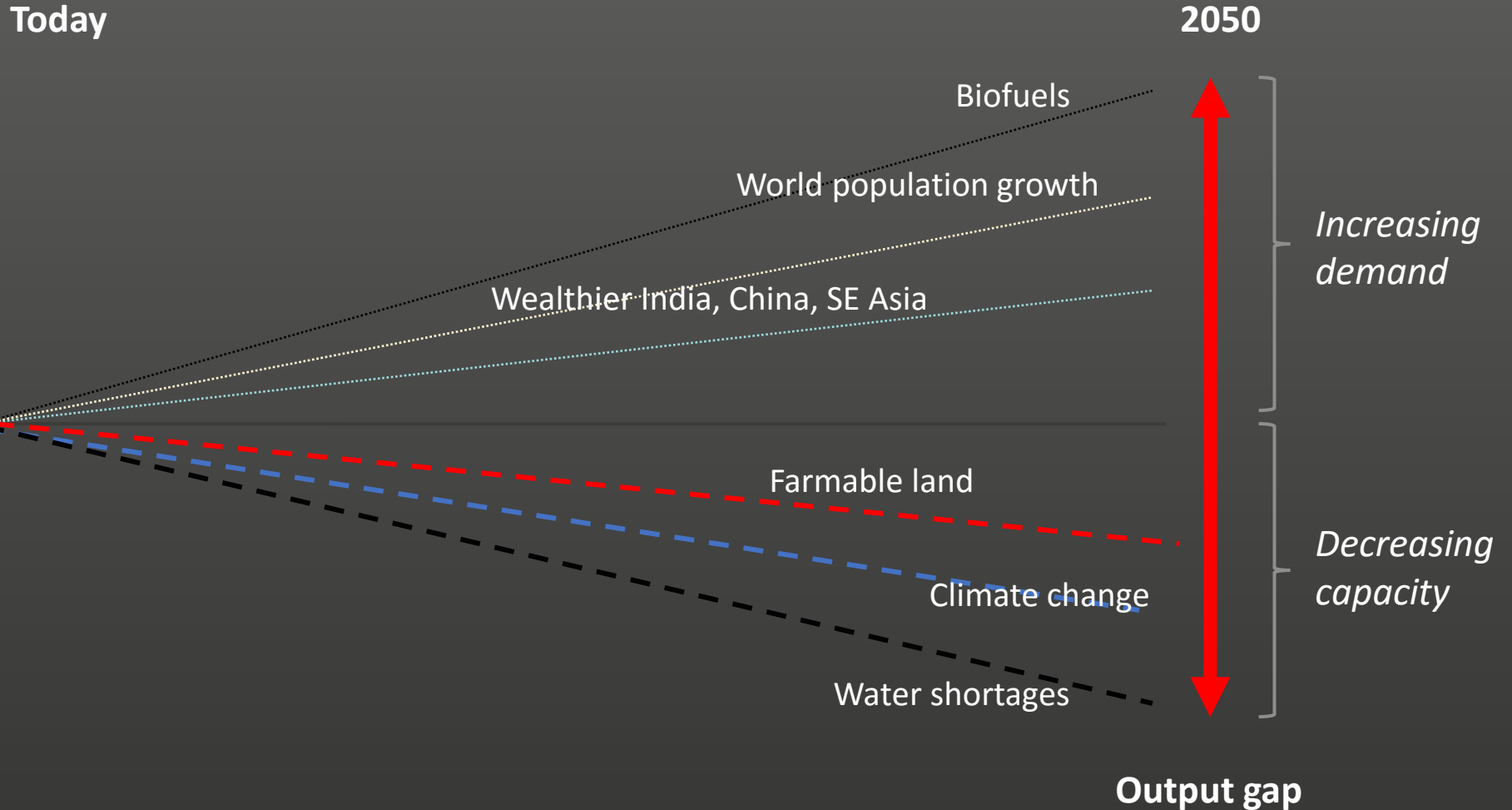
Risks/Costs of No Technological Innovation

INNOVATION AND FARMING: SOME CHALLENGES



1. Efficiency
2. Nutrition
3. Environmental impact
4. Culture
5. Legislation
6. Supply chain partnerships
7. Sustainability
8. Safety
9. Expectations
10. Trust

MEETING GLOBAL POPULATION DEMANDS



INNOVATION AND FARMING

“Take it to the farmer.”

Dr. Norman Borlaug

VISIT –[THESUSTAINABILITYALLIANCE.US](https://thesustainabilityalliance.us)
&
[THISHOWWEGROW.ORG](https://thisshowwegrow.org)



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