

A Conversation with Dr. Robert Fraley

June 2021 Round Table Meeting

Remember: Round Table is off the record.



Jim Tobin

ROUND TABLE FELLOW





Robert Fraley

WORLD FOOD PRIZE LAUREATE

Moving Forward with Modern Agriculture

Robb Fraley

Former Chief Technology Officer Monsanto Company

World Food Prize Laureate

 @RobbFraley

June 18, 2021

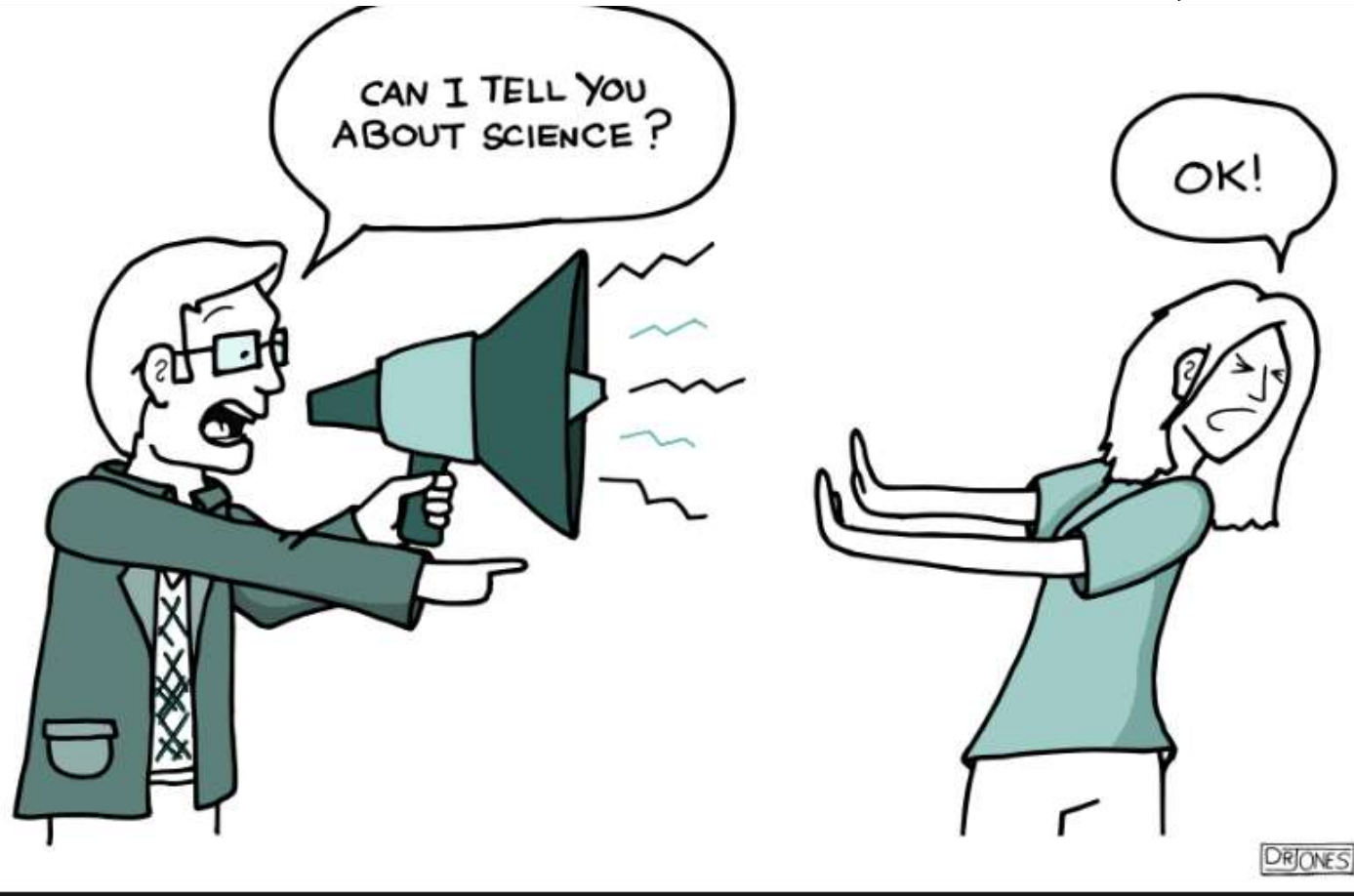
...And of Course: Grandkids!!!



What We Did Right

- 1) Strategic need: the Company needed to change
- 2) Very focused: create Roundup Ready Soybeans
- 3) Importance of Plan B's: fund for success
- 4) Team approach: R&D, commercial, legal, regulatory & customers
- 5) Broad licensing: increased access & support

Lessons Learned: What We Did ~~Wrong~~ Can Do Better



Source: Dr. Jones, https://www.ratbotcomics.com/comics/pgrc_2014/1/1.html.

- Passive response to concerns — letting the science speak for itself allowed others to shape our story
- Didn't communicate directly to consumers
- Led with facts and data instead of telling stories
- Fragmented efforts across industry — needed more allies to amplify messages

New Advanced Technologies Enable Farmers To Be More Precise and Productive Than Ever Before



Molecular Breeding

Creates germplasm combinations that are optimized for specific growing conditions to help increase yields while using fewer natural resources



Gene Editing

Improves efficiency within a plant's DNA by enabling desired characteristics (i.e., drought tolerance, increasing production of key nutrients, etc.)



GMOs

Enables farmers to adopt more sustainable agronomic practices (i.e., conservation tillage) that improve soil quality and reduce runoff



Microbial Seed Treatments

Increases yields, enhances nutrients, and reduces disease pressure



Precision Agriculture

Data science, sensors, drones and AI allow farmers to be more precise with their input applications resulting in significant conservation of resources, especially water



Farm Equipment Improvements

Advanced robotics and imaging tools help make farming operations more productive and sustainable by saving energy and inputs

Startups Are Changing The Landscape

NEW ENTRANTS INCREASE TECHNOLOGIES

- More than 4000 start-up companies were involved in the ag-food ecosystem as of 2021
- More than \$80 billion in VC investment since 2010
- Since 2013, over 2,500 applications have been made for permits to develop traits by 130+ unique companies and research institutions
- Farm-to-fork investments in Digital ag, IT, seed tech, food tech continue to rise.



Communication & Acceptance of Ag Technologies are Essential to Meet Future Demands



New Agricultural Innovations are Disrupting Everything



Focus on Environment is Key to Public Acceptance



Without Better Communications, Nothing Else Will Matter

Communicating the Story of Modern Ag: Focus on Social Media



Nearly 1/2 of all Americans get their news from Facebook



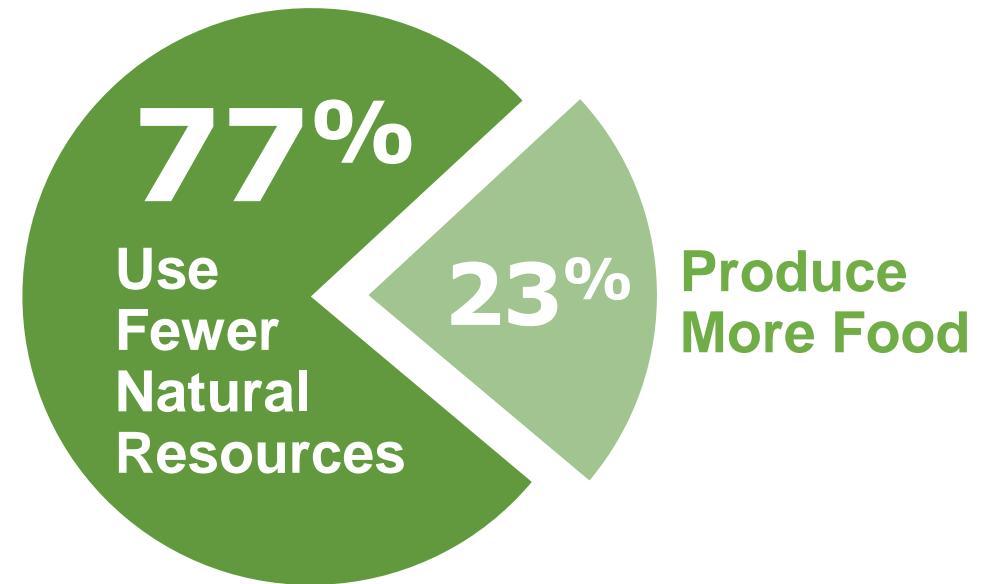
Expected to surpass TV as America's #1 Most-Watched Platform³



Communicating the Story of Modern Ag: Promote Environmental Benefits

“Which is more important to you personally? That agriculture...”

If we look only at the people who are less favorable toward modern agriculture, they **prefer an environmental focus** over producing more food **3 to 1**.



Find Partners & Allies to Amplify Messages





Thank you
