

Feeding our Future Role of Science, Technology and Innovation

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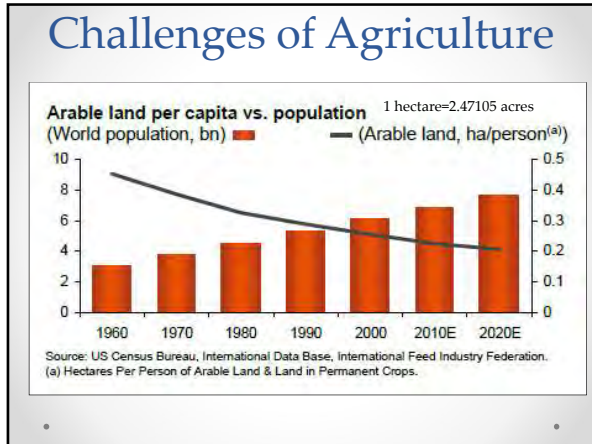
Disclosure



How many grains of rice?



Photo Credit: "Brown Rice" (CC BY 2.0) by Dani and Rob





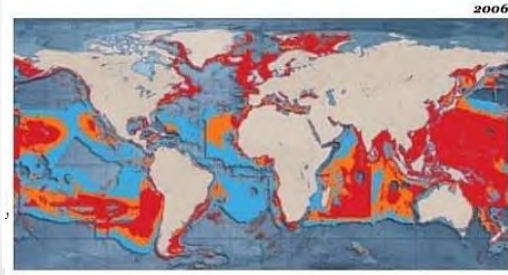
Challenges of Agriculture

Apple-Earth

- Cut an apple into quarters. Put aside three of the quarters
- Slice remaining quarter in half. Put aside one of the slices
- Slice your eighth into four sections. Put aside three sections
- Take the 1/32nd piece that is left.
- Carefully peel it

Photo credit: "Apple" (CC BY 2.0) by jking89

World Wildlife Fund's 2012 "Living Planet" Report



The expansion and impact of world fishing fleets

US Food Waste

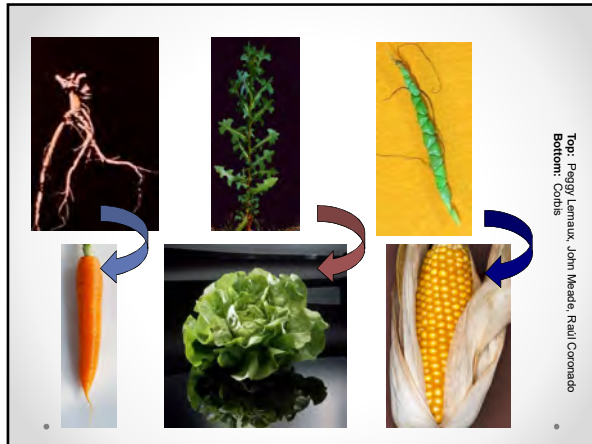


Photo credit: "2006_04_10" (CC BY 2.0) by sportist

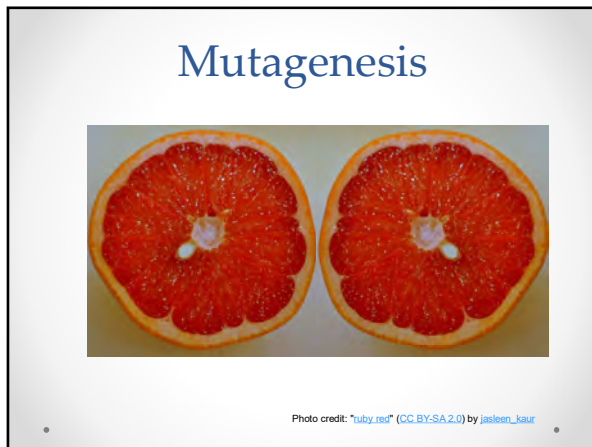
Innovative Technology in Feeding the Future World



Photo credit: World Food Day







Transgenic or GMOs

Infographic by Xiao Zhi Lim, Genetic Literacy Project

Photo credit: Golden Rice Project

Photo credit: Bill & Melinda Gates Foundation

Photo credit: ars.usda.gov

Photo credit: Amy Myrdal Miller

Academy of Nutrition and Dietetics Foundation
Future of Food Initiative

RNAi

Arctic® Golden & Arctic® Granny Apples
Okanagan Specialty Fruits

Innate® Russet Burbank (left) next to conventional Russet Burbank 30 minutes after peeling. JR Simplot

Food Waste Savings Calculator

Conventional Burbank		WHITE RUSSET™ Potatoes	
Product Comparison		Final Results	
340 days	340 days	11.0 %	1.0 %
250 units	229.33 units	44.5 lbs.	49.5 lbs.
12,143 units	10,916 units	540,357 lbs.	540,357 lbs.
		0 lbs.	61,328 lbs.

Food Waste Diverted to Compost

J. R. Simplot

Product Comparison Labor Costs Final Results

CONVENTIONAL Burbank Potatoes VS. WHITE RUSSET™ Potatoes

Start by entering your conventional burbank potato use.

50 lb. cases used / week

days open / year


Price per 50 lb. case

White Russet™ price per 50 lb. case

<http://emailtemplates.ahfx.com/simplotcalc3>

CRISPR

Clustered Regularly Interspaced Short Palindromic Repeats.



CRISPR mushroom resists browning

Photo credit: CRISPR Mushroom: Genetic Literacy Project

In Vitro Protein

Churchill 1931 – “Fifty years hence, we shall escape the absurdity of growing a whole chicken in order to eat the breast or wing by growing these parts separately under a suitable medium.”






Photo credit: Churchill. <http://www.publicdomainpictures>
Petri dish grown meat: David Parry / PA Wire

3-D Printed Food



Photo credit: Frey T. Futurist Speaker Website.
Photo credit: Edible Growth: Food Printing's Next Big Thing?
<https://3dprintingindustry.com/news/interview-foodini-working-title-97581/>

Automated Restaurant



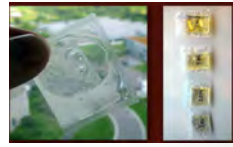
http://www.nytimes.com/2015/09/09/upshot/restaurant-of-the-future-service-with-an-impersonal-touch.html?_r=1

At Your Service



<http://www.businessinsider.com/momentum-machines-is-hiring-2016-6>
<http://www.dailymail.com/tag/robot-themed-hotel>
<http://gialym.ai/2mj0ZZY>

Packaging



Bob Burger Edible Packaging Brazil: www.wikicells.com
<http://www.monocell.com>; <http://2012.igem.org/Team/Groningen>

Data Driven Agriculture



Photo credit: Illinois State Museum: <http://exhibits.museum.state.il.us/exhibits/athome/1920/sideby/work.htm>
http://agriculture.papemachinery.com/images/uploads/new_equipment/6982/DSC0115_9560R_642x462_full.jpg

Vertical Farming



Square_Roots_1.JPG

Data Driven Agriculture



Photo credit: "Farming" (CC BY 2.0) by Lima Pix

Shared Values



- Food Fight
 - Divisive and emotional food issues
- Shared Values
 - Food safety, healthy, affordable food & environment
 - Care deeply about the health and safety of family and selves
- Local, organic, conventional, genetic engineered
 - Use best practices of every food production technology
- Overarching all
 - Good governance
