



**A Noble Ambition: Feeding a Hungry World  
Connecting Talent Capacity to Increased Productivity**

# Connecting Talent Capacity to Increased Agricultural Productivity

## Panelists:

- Dr. Thomas J. Herlehy, Land O' Lakes
- George Nfedt, PANNAR SEED
- Vito Rugani, Greenway Farms (Pty) Ltd.

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## **Statement of the Problem**

**Can we feed a hungry world of some 9 billion people by 2050?**

**Is it possible?**

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**“The world has the technology — either available or well-advanced in the research pipeline — to feed a population of 10 billion people. *The more pertinent question today is whether farmers and ranchers will be permitted to use this new technology.*”**

**-Dr. Norman Borlaug**



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**We can feed a hungry world of some 9 billion people by 2050!**

**But we need to improve the human capacity to adopt modern farm management practices and use new technology in a sound and correct manner in order to raise agricultural productivity.**

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## **Agricultural Productivity**

**There are huge gapes in productivity between OECD (industrialized) countries and the developing world.**

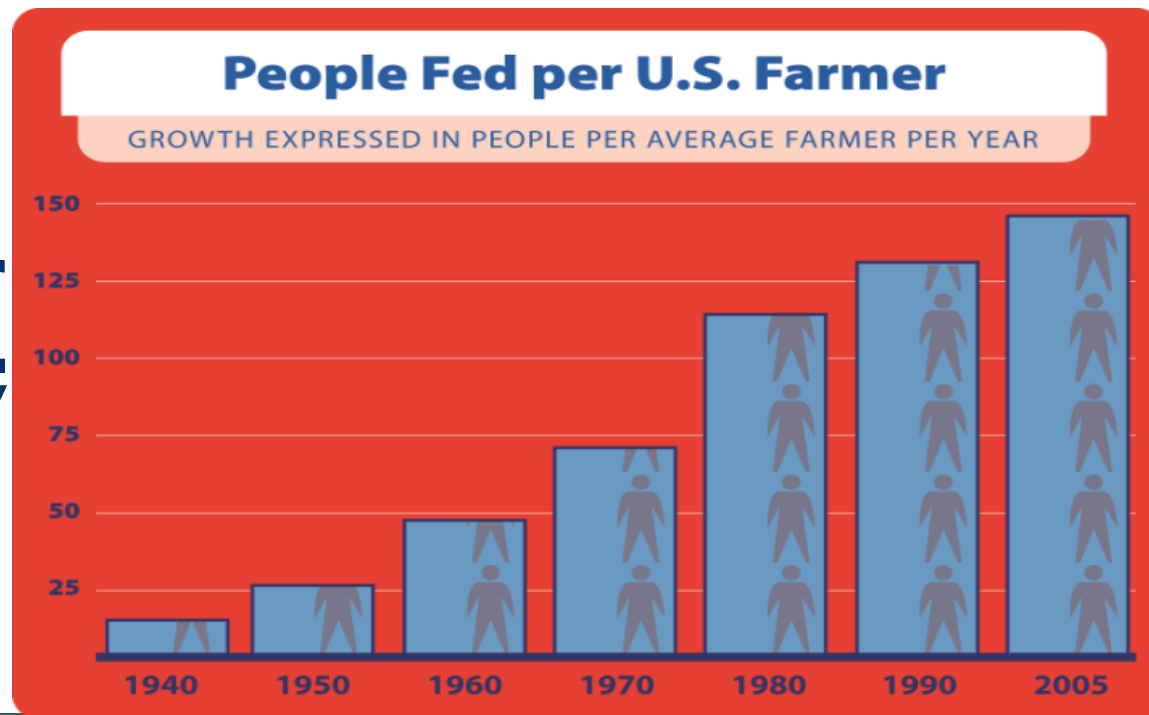
**OECD = Organization for Economic Cooperation & Development (34 countries) – see: [www.oecd.org](http://www.oecd.org)**

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## US Agricultural Productivity

**In the 1930s, the average US farmer fed 10 people.**

**In 2005, the average farmer fed 150 people; today perhaps 200 people.**



Source: American Farm Bureau Federation

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# US Agricultural Productivity

## **Corn yields:**

- 1930 – 20 bushels/acre
- 1960 – 55 bushels/acre
- 2011 – 150 bushels/acre

## **Wheat yields:**

- 1930 – 14 bushels/acre
- 1960 – 26 bushels/acre
- 2011 – 45 bushels/acre

## **Per-cow milk production**

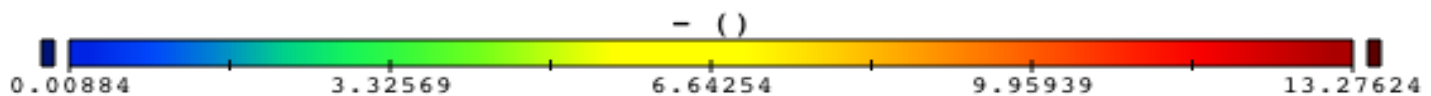
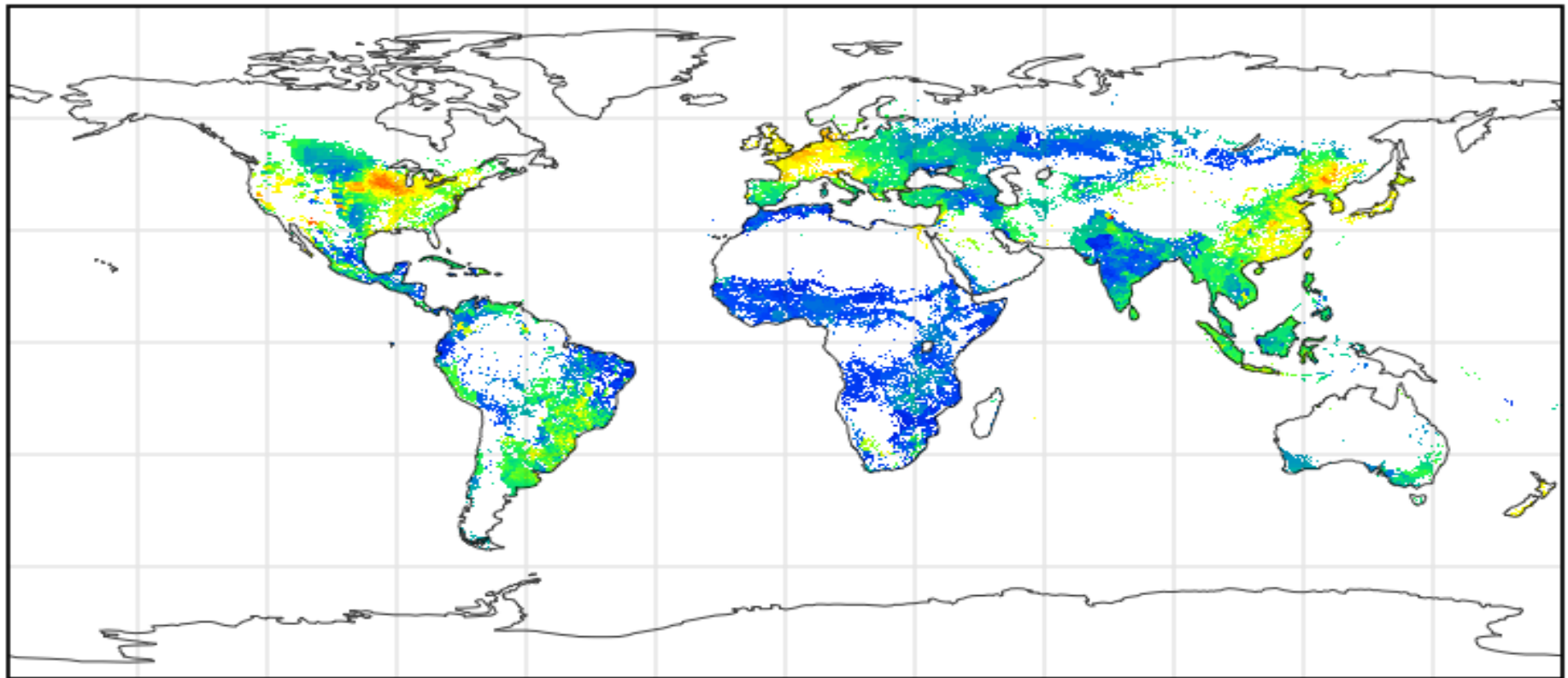
- 1930 – 4,500 lbs./cow
- 1960 – 7,030 lbs./cow
- 2011 – 20,450 lbs./cow



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# Agricultural Productivity: Global grain yields



## Developing Country Agricultural Productivity

**Average per acre productivity for corn, wheat, rice, is only 25-30% of that of the USA and OECD nations.**

**Why?**

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## Developing Country Agricultural Productivity

**Hybrid seeds** – only 33% of all African farmers use hybrid maize (corn) seed; only 47% in India.

**Fertility treatments** – only 5 kg. per acre in Africa vs. almost 100 kg. per acre worldwide.

**Crop protection products** (herbicides and fungicides) – low use in Africa.

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## Education – Knowledge and Skills

**Farming as a business – not a way of life.**

**Adopt modern business practices on the farm.**

**Give farmers choices – provide science-based information and let farmers choose what technology to use.**

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# Education – Knowledge and Skills

**Literacy and numeracy skills**

**English language skills**

**Analytical skills**

**Writing skills**

**Public speaking skills**

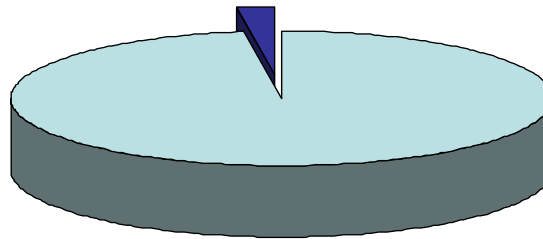
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## Education – Knowledge and Skills

### **Policy makers: only 12 of 535 Members of Congress have an agr background:**

- 3 ranchers
- 3 organic farmers
- 2 veterinarians
- 2 vintners
- 1 dairy worker
- 1 fruit orchard worker

■ Members of Congress with Ag Background



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# Education – Knowledge and Skills

## Consumers – Voters

**The challenge:**

**Are we going to make decisions based on emotion, opinion and nostalgia?**

**or**

**Are we going to make decisions based on accurate data and sound science?**

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## Panelists:

**Talent**

**Knowledge & Science**

**Skills to apply knowledge correctly**

**Challenges & Solutions**

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## Open Q & A session

# Thank you!!

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