AgTech: Opportunities and Challenges

IDAHO STATE DEPARTMENT OF AGRICULTURE

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What is AgTech

- Not just sensors and computer chips
- AgTech is scientifically-driven farm practices, equipment or processing:

Bio-engineered/transgenic crops

- Not just GMOs but also plants raised through traditional plant breeding to produce superior characteristics to mitigate drought, heat, pests, etc.

Proprietary breeding

- Scientific, custom approach to raising livestock

GPS/precision ag

- Reduce use of fuel and chemical inputs

Water management and improved equipment

Conservation-based best management practices

Food manufacturing and related advancements

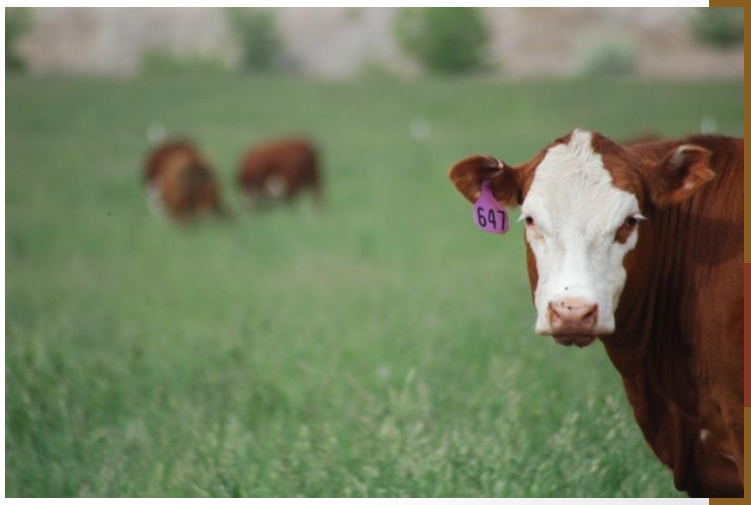
What is AgTech

Today, no one would survive very long farming like his or her grandfather did.

AgTech is everywhere—and has been for a long time.

AgTech Makes a Difference

- Just look at Idaho ag productivity
- Idaho has 1 farm for every 64 citizens
- But, we produce more food than we could ever consume in-state
- If we tried, we'd each have to eat the following every day:
  - 195 slices of bread
  - 49 potatoes
  - 2 lbs of cheese
  - 1.5 lbs of beef
  - 2 onions
  - 3 cups of beans



Why is AgTech important to everyone?

- AgTech is fundamental to agriculture—and agriculture is fundamental to Idaho's economic success
- In Idaho, agriculture and food processing account for:
  - 20% of sales
  - 14% of jobs
  - 16% of GSP

Opportunities

Scale Neutrality

- AgTech allows producers to move beyond traditional roadblocks of investment or access

Opportunities

AgTech can help mitigate the challenges that always will exist in agriculture:

- Farming is inherently risky
- Agriculture is expensive
- Environmental disasters (drought, heat, pests)

Opportunities

Resources

- Innovation helps us make the most of precious resources

Managing Water

Challenges

Policy/Regulation

- Innovation will always outpace regulation
- How can producers protect themselves?
- How can companies invest without safeguards?

Challenges

Who owns the data?

Is it secure?

Is it interoperable?

Is it readily accessible?

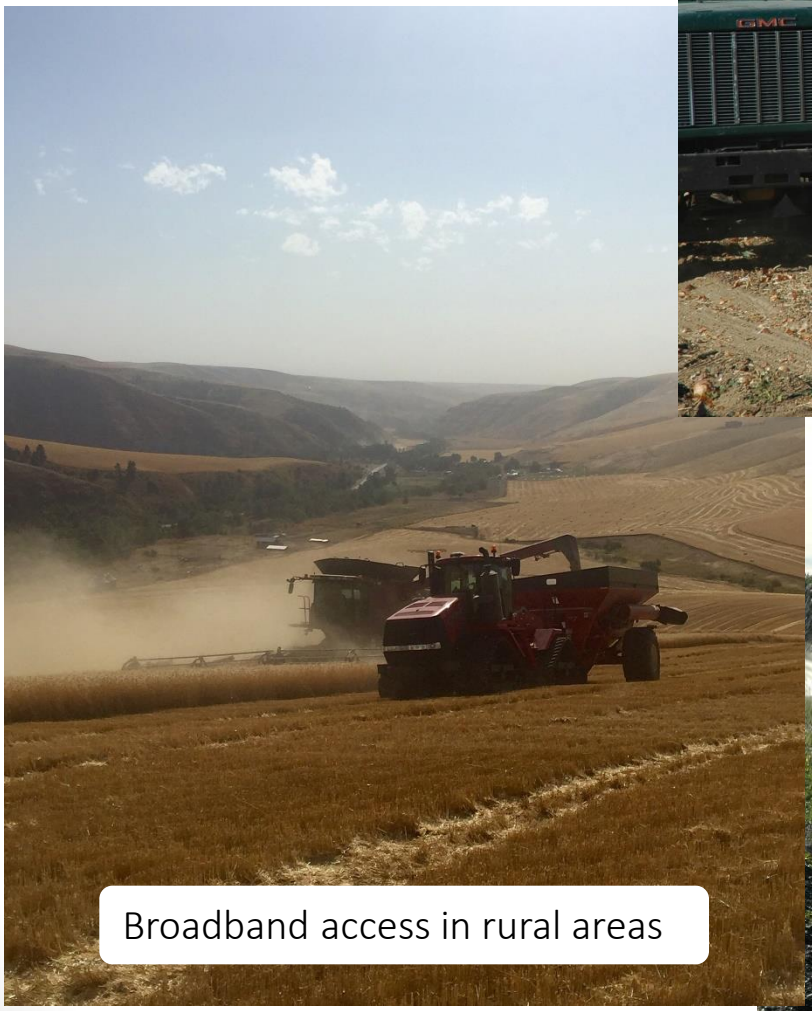
Big Data

Challenges

Infrastructure

- How does AgTech deal with on-farm conditions and infrastructure challenges?

On-farm conditions (dust, movement, etc.)



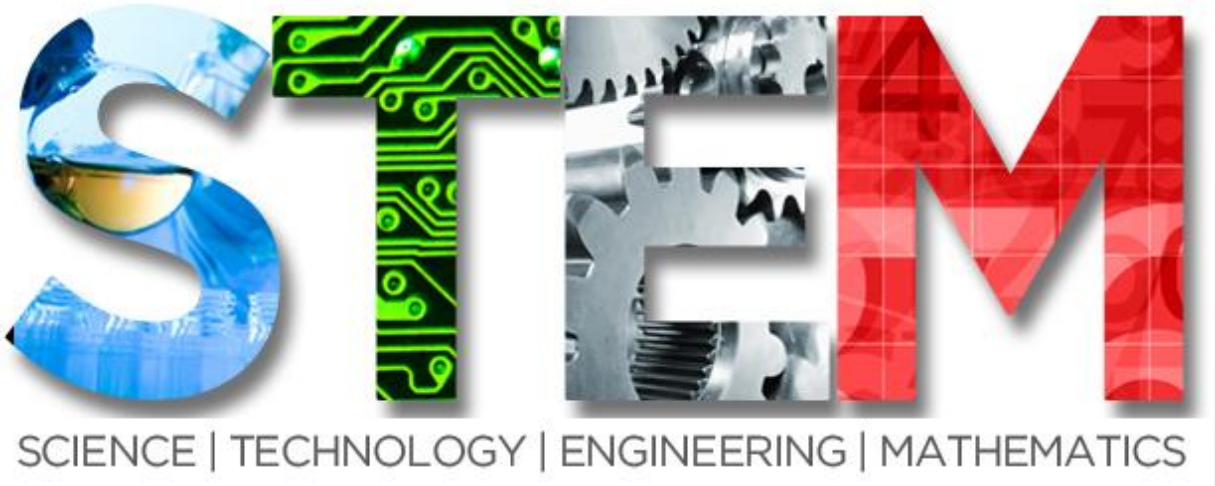
Broadband access in rural areas

Moisture and inclement weather

Challenges

People

- Shortage of people
- Fallacies in thinking



Questions?