Food Insecurity

What is Food Insecurity?
Food insecurity describes an absence of healthy, affordable, good quality food

Why Make the Transition?
Current industrial methods of agriculture are not sustainable. They lead to soil erosion and pollution

How Does Technology Help?
Technologies used in precision agriculture increase production at lower costs. If it costs less to produce it will cost less for consumers
Precision Agriculture

• Utilizes technology such as sensors and drones to precisely monitor crops and resources in order to maximize production while reducing resource waste and pollution.¹

• Soil erosion is one of the biggest issues farmer’s face.²

• Efforts should be focused on finding long-term solutions instead of short-term quick fixes.³

Technology: Sensors

• In ground sensors give farmers crucial data about their crops’ needs and allow them to respond to those needs with precision.\(^1\)

• Being able to respond quickly and precisely prevents pollution caused by over irrigation and fertilization.\(^2\)
Technology: Drones

- Unmanned Aircraft Systems (UAS)
  - Utilizing drones in agriculture has been increasing in frequency as technology advances.

- These systems can be used to render 3-D maps of farmland and detect many forms of crop stresses.
  - Having a way to quickly and accurately evaluate farmland, respond to crop needs, and detect crop diseases means having a higher crop yield.

Benefit to Farmers

• According to the United States Department of Agriculture, implementing precision agriculture on a 1,000 acre farm would save that farmer roughly $13,000 every year.

• Making this transition will be expensive; however, most transitions to precision agriculture pay for themselves within two to three years.
Embracing the Future

• Creating more programs that focus on drones and technologies in precision agriculture help meet the demand for trained professionals for farmers to hire.

• Smaller programs such as certifications would give farmers the opportunity to learn how to use more advanced technology on their own.

• Funding the research and development of technologies used in precision agriculture will increase cost efficiency and crop yields worldwide.

• Having strong food security allows more developed nations the opportunity to aid others.
Conclusion

• Transitioning to precision agriculture saves money, saves the environment, and reduces food insecurity.

• The continuation and expansion of educational programs and research/development of technologies used in precision agriculture is essential.

• Benefits will eventually be seen on a global scale.
References


