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Informative Speech Outline Organizational Pattern:

**Introduction**

A. **Attention Getter:** Imagine a future where food is scarce to the point where proper nutrition is hard to come by due to an unsustainable population.

B. **Credibility Statement:** According to farmpolicyfacts.org The world population will grow from 7.2 billion to 9.6 billion by 2050. Producers will need to double food production by 2050 to keep up with the growing demands (Facts.).

C. **Thesis Statement:** With the proper under standing of agriculture producers can use history of the past, use of GMOs, and proper techniques can be used to boost production.

**Body**

A. **First main point:** The proper knowledge of past events producers can make smart judgment calls to produce adequate food source.

1. Producers can use past weather patterns to predict what crops to produce.

2. Keeping history of previous crops and previous sampling of fields.

a. Setting goals when soil sampling to bring soil fertility up

b. Crop removal from previous crops

B. With the proper record keeping more educated decisions can be made.(WinField)

**Transition Statement**: With the use of the previous records of the field and the use of proper management with the aid with GMOs feeding the growing population will become achievable

II. **Second main point**: The proper management of time planting and using the right seed to reduce the use of chemicals used on the crops to prevent the pesticides in the food chain.

A. GMO crops produce high quality food without the damage of insects.

B. These genetically modified organisms produce higher yields with the advantage of tolerant to herbicides to produce higher yields from weeds.

1. It is controversial how people believe GMOs are bad

2. The truth and purpose of GMOs

a. With the use of certain GMOs and genetics can cause great benefits found with resistant to fungus, bacterial disease, nematodes, insects, and herbicide tolerant.

b. With the proper use of GMOs the timing plays a huge role in the development with the proper techniques. (WinField)

III. **Third main point:** The proper techniques can cause complete success or failure to ones growing season.

A. Right seed planted on the right growing date and harvested during the right time.

B. Soil health with the use of cover crops and nurse crops.

1. Using a soil probe taking 8 to 15 samples 6 to 8 inches deep and using composite or grid sampling.

2. Tissue sampling can be taken in once the plant has stated to grow (Purdue).

**Conclusion**

A. **Summary:** Creating sustainable agriculture may come with some challenges, but with the proper under standing of agriculture producers can use history of the past, use of GMOs, and proper techniques can be used to boost production to feed the growing population.

B. **Impact Statement:** With the changing times, producers will need to nearly double the production they now produce. Producers have everything they need they just need to apply the information they already have.

Reference page

"Facts & Resources." Farm Policy Facts. Farm Policy Facts, n.d. Web. 08 Feb. 2017.

Purdue, Midwest Cover Crops. Aug 2014. Midwest Cover Crop Councel.

WinField Solutions, LLC, 2002. Principles of Crop Nutrients. Saint Paul, Minnesota. WinField