

E. The Story of Advanced Industrial *Food*

1. The story of advanced industrial food starts with the “Green Revolution” in **1945**.
2. This revolution has many parts. It involves irrigation (water distribution) and fertilization (plant food) in combination with herbicides (chemicals to kill weeds) and pesticides (chemicals to kill bugs).
3. Together these allow us to make more food than ever before.
4. The main contributor to this Green Revolution (1945-70) was a scientist named Norman Borlaug, who won the Nobel peace prize in 1970.
5. Because of it, we have “superabundance” in modern times. How did we get here?
6. At the beginning of history, the first “Agricultural Revolution” is when people first developed farming.
7. For thousands of years, little changed, except that because of Christopher Columbus, corn, potatoes, and tomatoes, among other things were brought from America to Europe, and wheat and animal breeds of cattle and horses came to America.
8. The first *proto*-industrial advance to impact the amount of food available to people was called “crop rotation.” Using this method, farmers change what is grown on the land, and some plants are plowed under instead of being used so that they can be “food for food.”
9. *Industrial* progress started in 1910, when a German scientist named Fritz Haber invented the “Haber Process” to create a chemical fertilizer for plants. This permitted much more food to be grown.
10. When it became easier to grow food, fewer and fewer people were needed to work on farms, and they moved to city.
11. This led to the challenge of how to transport all the food produced from the farm to them in the cities. The Frigidaire Company helped invent the electrical “refrigerator” in 1916. Fridges and freezers help delay the spoiling of food.
12. Another modern change was the rise of the “supermarket,” such as the Piggly Wiggly, which first opened in 1916, where people can buy all the newly abundant foods.
13. So we have all the food we need now. But we also have junk food and processed food, so some people now choose “organic” food to try to be healthy.
14. On the other hand, scientists continue to try to use science to improve food, and now create more and various kinds of “genetically modified organisms” or “GMOs”.
15. At least we have enough food, and now we can choose if we want organic food or GMOs.



The spraying of crops with pesticides and herbicides is part of the “Green Revolution” that makes modern *super-abundance* possible.



Because of scientists like Norman Borlaug, famines are essentially a thing of the past in our world.