

**Quiz 1 for Module 1: Introduction to Ag-Energy**  
**ANSWER KEY**

1. What are the three top fuels we receive our energy from in the United States?

**Petroleum, natural gas, and coal.**

2. What does “nonrenewable” mean?

**Cannot be replaced by natural means.**

3. What is indirect energy use? Give an example.

**Indirect energy use is energy used off the farm to manufacture farm inputs. An example would be fertilizers.**

4. What is direct energy use? Give an example.

**Direct energy use is energy used right on the farm for various operations. An example would be electricity.**

5. Is the demand for agricultural products shrinking or growing?

**Growing.**

6. Which of the following causes the Greenhouse Effect?

A. Stronger sunshine causing faster plant growth.

**B. Gases in our atmosphere that trap heat.**

C. Satellites reflecting light into our atmosphere.

D. All of the above.

7. What are the three main greenhouse gases affecting global climate change?

**Carbon dioxide, methane, and nitrous oxide.**

8. What is the important function of snow caps, glaciers, and ice in terms of the Greenhouse Effect?

**Snow caps, glaciers, and ice reflect sunlight back into space so that it is not absorbed by the earth (further heating the earth up).**

9. An increase in ocean acidity is one effect climate change is having on the **global** climate.

Give three more impacts of climate change on the **global** climate.

**Increase in Earth’s average temperature, reduction of ice and snow, sea level rise, increased frequency/intensity of extreme weather events, alter ecosystem characteristics, increase threats to human health, and melt permafrost.**

10. Soil erosion is one effect climate change is having on **agriculture**. Give three more impacts of climate change on **agriculture**.

**Increase in extreme weather events, changing growing conditions, increase in pests and diseases, weeds harder to control, livestock death/reduced performance, soil erosion, air pollution, and water pollution.**

11. Why might an earlier spring negatively impact pollinators?

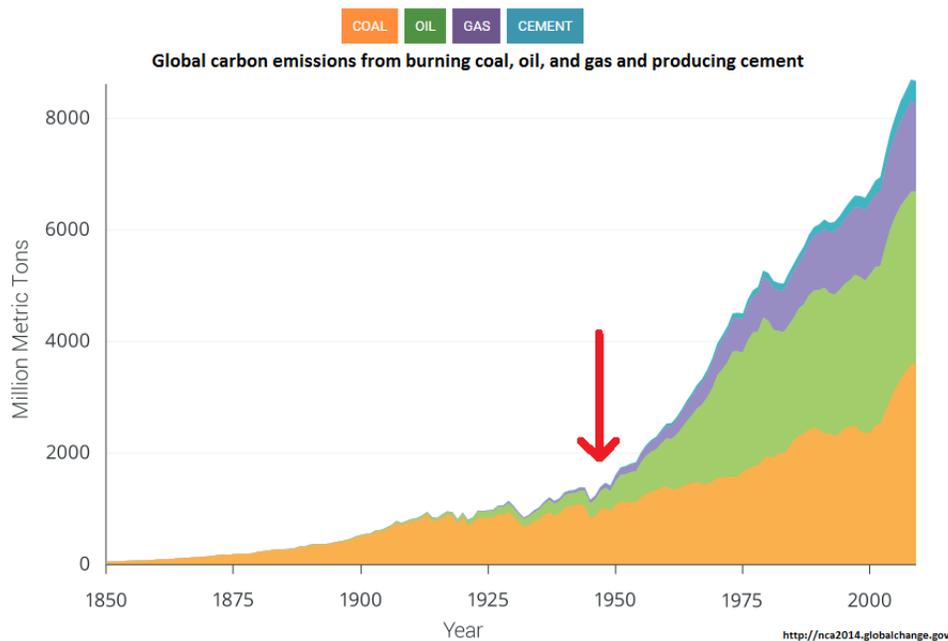
**Pollinators will emerge earlier and begin searching for food before flowering plants have flowered. This will cause more pollinators to essentially starve. The pollinators and plants are coming out of sync with each other.**

12. What is one solution we can use on the farm to combat climate change?

**Implement energy efficiency, practice energy conservation, and produce renewable energy.**

13. What event in history resulted in the explosion of agricultural growth as indicated on the chart below? What might coal, oil, gas and cement be used for during this period?

**The Green Revolution. Coal, oil, and gas burned as fuel for manufacturing processes, transportation, electricity, and crop production. Cement used for infrastructure.**



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