

Name:

Period:

Topic:

Date:

Warm Up

1) In the United States, most families spend less than ___% of their income on food. In poorer parts of Africa, that number rises to ____%. When prices double or more, food becomes unaffordable and riots can result.

- Periodic food shortages due to _____, pests, storms, or similar events can trigger explosive _____ increases. Increasing yield and stabilizing the _____ supply by increases in drought and pest resistance are primary goals of global food policy.

2) Approximately 925 million people worldwide (____% of the world population!!) do not have access to enough food to fully meet their _____ needs.

- Undernutrition—meaning people do not _____ enough calories.
- Food _____ — all people at all times having access to sufficient, safe, and nutritious food.
- World Health Organization: 50 _____ people starve to death every day.

3) When quality or _____ is insufficient, nutrition is poor and people become at _____ for diseases leading to many permanent maladies, such as _____ and death.

- Malnutrition - defined as a state of poor health that _____ from inadequate or _____ food intake.
- Political instability and _____ degradation are also significant factors.
- _____ countries are much more likely to experience armed conflict, poverty, and social disempowerment leading to under-nutrition.

4) The **Green Revolution** refers to a series of _____, and development, and technology transfer initiatives, occurring between the 1940s and the late _____, that increased agricultural production worldwide, particularly in the developing world, beginning most markedly in the late 1960s.

- As global _____ rose and agricultural productivity stalled, the international community launched a _____ effort to bring modern agricultural techniques, including the use of pesticides, modern irrigation methods, and chemical fertilizers, to developing countries.

5) High Yield _____ - they have higher nitrogen-absorbing potential than other varieties, allowing for faster and more efficient growth.

- Selective _____ in many staple crops have greatly increased yields worldwide. These varieties have also been bred to resist diseases, pests, and grow faster.
- Global food production has _____ and famine _____ enough to grow enough food to feed the approximately 7 billion people on earth.
- Yet _____ is still present in many parts of the world.

6) The New Green Revolution also _____ new problems:

- Loss of crop _____
- Water contaminated by _____ from farm fields
- Water shortages from overuse

7) A **cash crop** is an agricultural crop which is grown for sale to return a _____.

- Imported food _____ are cheaper than locally grown, often due to subsidies.
- Most farmable land is then converted to _____ profit cash crops which can be exported.

8) GMO – An _____ where genetic material has been transferred from one organism to another.

- This can give organisms new traits that are _____; higher resistance to pests, drought, and viruses.
- One method of increasing crop _____ is with crops that have been genetically altered to be more pest or drought resistant or increased nutrient production.
- In the United States, more than ____% of processed foods contain GMOs, _____ 85–90% of corn, soybeans, and cotton.

9) **Organisms** that have altered genomes are known as _____ **organisms**.

- Basically any GMO would be considered _____.
- Transgenics allows for _____ to grow in a wider variety of environmental conditions, including pest and _____ resistance.
- Fears of GMO's include contamination of wild species by cross-_____, the potential medical reactions of humans by direct consumption, and concerns that beneficial insects may be negatively impacted.

10) Advanced technology (GMO's) is not the only _____. Many communities are using older techniques to improve agricultural yields. **Microfertilization** _____ using small, precise amounts of material for each individual plant, rather than the entire field.

