**Food Resources**

1. The Race to Feed the World
2. Increased Food Production
3. Reasons

a.

b.

c.

d.

e.

1. Sustainability depends on ….
2. Nutrition Problems
3. Undernutrition
   * 1. Means…
     2. Food security –
4. Overnutrition means…
5. Malnutrition
   1. Means
   2. Kwashiorkor –
6. The Green Revolution
7. Impact of technology
8. Mixed consequences:
   * 1. Positive:
     2. Negative
        1. Intensive application of water, fossil fuels, inorganic fertilizers, and synthetic pesticides worsened –
        2. Impact of monocultures –
9. Biofuel
10. Fuels derived from organic materials, Ex. -
11. Impact –
12. Pests and Pollinators
13. Pesticides
14. Examples –
15. Problems with pesticides:
    * 1. Human health consequences
      2. Pesticide treadmill –
      3. Non-target organisms
16. Alternatives to pesticides:
    * 1. Biological control –
         1. Bt –
         2. Cactus moth –
      2. IPM (Integrated Pest Management) –
17. Pollination
18. Relies on insects
19. Populations of pollinators are declining
20. Genetically Modified Food
21. Process
22. Genetic engineering –
23. Genetically Modified Organisms (GMOs) –
24. Recombinant DNA –
25. Goal:
26. Results

1. Benefits

a. Insect resistant crops

b. Drought tolerant crops

c. Crops that increase yields

1. Drawbacks
   * 1. Increased use of chemical herbicides
     2. Potentially dangerous for human consumption
     3. Loss of biodiversity
2. The future of GM food– hinges on social, legal, political, AND scientific factors
3. Raising Animals for Food
4. Food and Energy
5. Eating meat is less energy efficient
6. Animals vary in efficiency
7. Feedlot agriculture
8. Feedlots –
9. Impacts:
   * 1. Increased economic efficiency
     2. Increased water pollution
     3. Antibiotics and Hormones
     4. Increased emissions of greenhouse gases
10. Aquaculture
11. Aquaculture
12. Benefits:
    * 1. Ensures a reliable protein source
      2. Reduces fishing pressure
      3. Uses less fossil fuels
13. Drawbacks:
14. High population density
15. Produces high amounts of waste
16. Accidental release
17. Sustainable Agriculture
18. Soil conservation practices –
19. Low-input agriculture -
20. Organic agriculture
21. Characteristics –

Organic Food Production Act (1990) –

1. Benefits
   1. For farmers –
   2. For consumers –
2. Challenges
   1. For farmers –
   2. For consumers –
3. Local food –