Introduction to Thermal Processing
Assignment 1

Chapter 1 in Manual

1. Find three (3) examples each for foods that have been spoiled by physical, chemical, and microbiological means. Finding foods spoiled by chemical means may be a bit more challenging than for the other two methods. Try to find examples that are different from those listed in the manual.

2. Thermal processing has a significant impact on the texture of foods. Compare the texture of three (3) cooked fruits or vegetables to their original uncooked forms. You may want to use rice, yams, potato, cassava, or other foods that you would normally see when both cooked and uncooked.

3. List the proper storage conditions for three fresh food crops. You should include considerations such as: temperature, ventilation, humidity, light, and the time for which they can be stored without spoiling.

4. List five (5) crops in your area that are frequently thermally processed.

5. Give an example of one crop grown in your area that is not usually processed thermally but could benefit from it. What are the potential benefits thermal processing could provide?

6. Examine crop in your area such as tomatoes, if they are grown near you. What are the peak times of year when tomatoes (or your selected crop) mature? What happens to the price at the times of peak maturity? How long does the local supply last? When the local supply runs out, where do people get their tomatoes to sell? How long do tomatoes in your area keep fresh before they spoil? If tomatoes are not grown or are not available in your area, select another suitable crop.

7. Take a look at a fresh local product sold in the marketplace near you. Evaluate its quality based on the following factors: appearance, colour, taste or flavour, and aroma. What happens to these factors when the product begins to spoil? Did you notice any microbiological problems with the foods at the marketplace? If so, describe them.
8. Check the milk supply in your area. Is all the milk sold in stores pasteurized? Can you purchase unpasteurized or “raw” milk in your area? Are the cheeses in your area made from pasteurized or raw milk? Describe a few of these cheeses.

9. Find three (3) examples of food deterioration or spoilage resulting from physical, or chemical or microbiological causes. Try to find different examples from those listed in the course manual. Examples involving foods that are unique to your area would be good here.

10. Give three (3) examples of foods you have seen that have been infested with insects. What were the foods and what were the insects?