**FJF Garden Tour “Through the Voice of the Farmer”**

**Supplementary Quiz/Worksheet Resource**

\*These questions are for easy transfer to an online quiz resource that you may personally use or is supported by your school (i.e. Canvas or Desire2Learn). \*

**Plot #1**

1. How many garden plots are showcased in the virtual garden tour map?

**Answer: 12**

1. What are the four main crops grown in the United States?

**Answer: Corn, Soybean, Wheat, Cotton (any order)**

1. The United States is the world’s largest producer of what three livestock species?

**Answer: Beef, Dairy and Poultry (any order)**

1. The U.S. pork industry is the third largest pork producer in the world. (True/False)

**Answer: False, second**

1. 8% of U.S farmers market their food locally, direct to consumer. (True/False)

**Answer: True**

1. 25% of U.S. farm products are exported each year. The five leading export market countries for the U.S. include: Canada, China, Mexico, \_\_\_\_\_ and \_\_\_\_\_\_.

**Answer: European Union and Japan (either order)**

1. The U.S. fruit and vegetable sector are a $5 billion dollar industry each year. Provide two examples of how this industry has expanded its market to consumers in the last decade?

**Answer: (either of these three, in any order)**

1. **Online grocery shopping**
2. **Meal kits**
3. **Growing organic market**
4. According A.G. Kawamura, a California fruit and vegetable producer featured in this tour, creating transparency within our food system means what is occurring between the consumer and the producer?

**Answer: When there is transparency there is learning being established between the consumer, the end user, and the actual producer.**

1. A.G. further detailed the challenge of no transparency between the consumer and producer. Explain one challenge he mentioned if we as agriculturists don’t maintain transparency? **Answer: There can be confusion, misguided information, lack of support for our food system by our peers/consumers**
2. Maintaining transparency between the producer and consumer can lead to a more knowledgeable consumer that can become a stronger supporter of our food and agricultural system. (True/False).

 **Answer: True**

**Plot #2**

1. Explain two main purposes of precision irrigation within the agricultural industry, highlighted in this video?

**Answer: 1. Allows remote monitoring and control of crop needs (during volatile weather changes)**

 **2. Only applies the necessary amount of water.**

1. The farmer showcased in this irrigation module, highlighted the risk related to investing in irrigation. What is the initial risk of establishing an irrigation system? What is one reward in taking this risk?

**Answer: Expense/cost of the system; protecting your operation when the weather/climate fluctuates**

**Plot #3**

1. The two largest agricultural crops grown in the U.S. is corn and soybeans. Where is the largest proportion of corn grown in the United States?

**Answer: The Heartland region**.

1. Although bees and other pollinating bugs can often be found near corn, pollination is primarily carried by the wind. (True/False)

**Answer: True**

1. The silky strands at the top of an ear of corn is attached to each developing kernel on the cob, these silks are present to aid in what process?

**Answer: Pollination**

1. Severe weather such as high winds or heavy rain during corn’s pollination stage of development, can damage the silks on the corn and ultimately hinder the production of what on the cob of corn?

**Answer: Kernels (leads to lots of “empty” kernels).**

1. Explain the difference in use/purpose between sweet corn and field corn?

**Answer:**

1. **Sweet corn is what often what consumers eat right off the corn, or what is packaged in the freezer or canned in the grocery store.**
2. **Field Corn: used for livestock animals, also used for food products such as corn meal, corn chips and corn syrup**
3. Soybeans represent \_\_\_\_\_ percent of oilseed production in the United States.

 **Answer: ninety (90)**

1. Soybean is an oilseed crop grown in the United States, what are two additional common oilseed crops grown in the U.S. and mentioned in this module?

**Answer: sunflower and peanuts**

1. What’s one colorful product, highlighted in the video, that is produced using soybeans?

**Answer: Crayons**

**Plot #4**

1. Farmers work in a uniquely close way to natural resources. List three resources that farmers and producers work hard to maintain healthy.

**Answer: Soil, water and Air**

1. Livestock producers additionally take strides towards protecting the \_\_\_\_\_\_ of their animals. **Answer: well-being (health could work as well).**
2. Danny Murphy, from Murphy farms, was featured in this module. Initially the land his grandfather purchased wasn’t very valuable but what three practices did his family farm establish overtime to improve their land?

**Answer:**

1. **No-till (to minimize soil erosion)**
2. **Adding cover crops**
3. **Establishing terraces**

**Plot #5**

1. Overseeing the well-being animals is complex. Producers measure and monitor many aspects of well-being. List two of the four elements producers measure and/monitor for their animals’ well-being?

**Answer: Nutrition, temperature, bedding and living quarters (any two of these four in any order)**

**Plot #6**

1. Pollinators move \_\_\_\_\_\_\_\_ from one flower to another, thereby fertilizing plants and allowing them to reproduce.

**Answer: Pollen**

1. Pollinators are vital to agriculture, in fact \_\_\_\_\_\_ of food and fiber crops around the world depend on it to reproduce.

**Answer: 30%**

1. Land not used for agriculture, that maintains a natural habitat of native grasses, trees and brush are areas farmers can protect for wildlife through programs such as conservation reserve programs (CRP). (True/False).

**Answer: True**

**Plot #7**

1. What is the order of fresh water use by industry from largest percent user of fresh water down?

**Answer: 1. Agriculture 2. Industrial 3. Domestic use (drinking water and sanitation)**

1. Technology has helped farmers and ranchers manage their water use more effectively. Name two of the four strategies mentioned that have helped producers minimize their water usage?

**Answer: Precision irrigation, drought tolerant seed varieties, rotational grazing, conservation tillage (any two of these in any order).**

1. \_\_\_\_\_ zones with vegetation between cropland and bodies of water, keeps the soil intact (reducing erosion) and acts as a filter as the water flows from the field to the water way. **Answer: Buffer**
2. A tile system is an earthen embankment or ridge built across a slope to intercept runoff water and reduce soil erosion? (True/False)

**Answer: False, terrace**

1. Tile systems are effective at reducing what?

**Answer: nitrates and other potential pollutants of water.**

**Plot #8:**

* + - 1. Technology has brought producers a long way in helping them protect their livestock animals and crops. Herbicides, seed technology, \_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_ have all played a significant role in protecting the health and value of both livestock and crops.

**Answer: Vaccinations, animal nutrition (either order)**

* + - 1. Threats to the health and value of livestock and crops are always evolving as mutations of certain diseases/viruses occur and resistance to builds against some vaccines or herbicides. (True/False).

**Answer: True**

**Plot #9**

1. Wheat is one of the most versatile and important grain crops around the world. In fact, it is in 20% of the \_\_\_\_\_\_\_\_ consumed by the people around the world.

**Answer: Calories**

1. What U.S. state is the largest producer of wheat?

**Answer: Kansas**

**Plot #10**

* + - 1. To build one inch of top soil takes hundreds of years; to destroy it only takes a few \_\_\_\_\_\_. **Answer: minutes**
			2. Using practices including no-till and cover crops can help protect soil healthy and structure how?

**Answer: Conserve water, prevent soil erosion, and nutrient run-off**

* + - 1. No-till is a way of growing crops without disturbing the top soil through tillage, it provides a layer of plant matter left after the previous harvest on the surface of the soil. This protective layer helps with what?

**Answer: evaporation of water from soil, reduces weeds (hinders their growth) and insect populations.**

* + - 1. Cover crops are crops grown during or after a primary crops season of growth such as radishes or turnips are used in a variety of operations including conventional and organic operations. How do they help soil health?

**Answer: Deposits carbon(nutrients) in the soil, deep roots break up compacted soil, prevents erosion/run-off of soil**

**Plot #11**

1. Seed and herbicide technology reduce the use of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ resources and aid in creating an affordable and abundant food supply.

**Answer: natural**

**Plot #12**

1. One in every \_\_\_\_\_\_ jobs are held by individuals within the agriculture and food industry. **Answer: ten**
2. Draw/outline and briefly describe each point the journey from seed to table, farm to fork value chain.

**Answer:**

**1. Input companies:** All the companies essential to starting up a farm operation, it consists of the agribusiness sectors. Includes: seeds, fertilizer, crop protection, animal health and nutrition, crop insurance, food ingredients.

1. **Farmers/Producers:** Combine inputs to provide their main commodities within fuel, fiber and food.
2. **Traders:** Consolidate commodities from the producers (crops, meats, oils, meat and biofuels) to sell farther up the value chain to organizations that add value to create a consumer face product.
3. **Food companies:** (bakeries, meat and dairy processors and snacks). Craft products that meet the complex and changing demand of the consumer market.
4. **Retailers:** Provide platform and reach for consumers to purchase products
5. **Consumers:** End purchasers of the product, they send signals to the entire value chain based on their preferences, questions and general concerns.