



Chapter 2

Crops, Would You Invest?

Standards

MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment

MS-LS2-5. Evaluate competing design solutions for maintaining biodiversity and ecosystem services.

CCSS.ELA-LITERACY.RST.6-8.7

Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually

CCSS.ELA-LITERACY.RST.6-8.10

By the end of grade 8, read and comprehend science/technical texts in the grades 6-8 text complexity band independently and proficiently.

Objectives

Students will be able to list alternative uses for crops.

Students will be able to evaluate effective uses for crops outside their intended uses.

Students will be able to describe how crops are harvested and processed.

Students will be able to describe how the public will benefit from an alternative use of various crops.

Materials

“Crops, Would You Invest?” handout

Time

45 minutes

Prior to the Activity

Read “Crops: Sooo Much More Than Food” (pg. 20) *Agronomy Grow With It!*

Author

John Nelson, Agri-Science Instructor

We all know that crops are usually produced for food. Either we eat them or feed them to the animals that produce other consumable products like the dairy cow. Agriculture has become efficient in using crops for more than one purpose.

Think of a popular crop. For example: Corn. What do we use corn for?

- Students should respond we use corn for feeding animals like beef and dairy cattle, pigs, chickens, and maybe they will say for humans to eat as well.

There are many alternative uses as well. See the chart on pages 28-29 in *Agronomy Grow With It!*

Ask students to think of a crop that has an alternative purpose.

- Students may come up with a few products that are used in multiple ways.

Read “Crops: Sooo Much More Than Food” (pg. 20) in *Agronomy Grow With It!*

- Begin a discussion about the alternative uses of common crops.
- Have students provide an example from the reading they found interesting or surprising.
- If needed, have them reference the chart at the end of the section (page 28 and 29).

Ask students if they knew there were this many alternative uses of crops?

Distribute the “Crops, Would You Invest?” handout

Begin by selecting or numbering the options from the chart that best fits your class or region. Then break the class into groups of 3.

Allow students to select from the preferred list or draw a number to determine which of the crops and associated product their group will be working with.

- Instruct students to be sure they record their selections on the handout
- Read the directions of the “Crops, Would You Invest?” handout with the class.
- The internet will be the simplest resource for this broad of a topic area.

Related ideas:

Students could research the products that use a crop product in them and find what that crop product has replaced. What is the environmental impact of using the crop, a renewable resource, instead of the component that has been used?

Extra credit opportunities could include finding an addition to the list, and they could design their own alternative product.

Look for videos that fit with the student’s examples which may be a fun way to help explain. (if students don’t find the videos first)

Look for the genetic alterations that have taken place to grow crops that are more suited for alternative uses. Example: from the chapter (pg. 26) the sugar cane is being selected for varieties that will grow in cooler environment to increase the production to meet a larger demand.

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AGRONOMY LESSONS: AMERICAN SOCIETY OF AGRONOMY

Worksheet Chapter 2: Crops, Would You Invest?



From the chart on page 28 and 29 of *Agronomy Grow With It!* each group will receive (or select) a crop and a product that is produced by using this crop.

Please record your crop and product below:

Crop _____ Product _____

Once you have received your product the challenge begins.

You have been hired as a consultant for a multi-billion dollar investment company to find the next million dollar deal. Your job is to report back to your advisory board and convince them the crop you selected will be the next great investment.

Being well trained in the investment industry, you know that your proposal to the advisory board will need to have either a power point presentation or poster showcasing extensive research why your product is a million dollar investment. The company will use your research to determine how they can invest in the production of the product with a high probability of future growth. The decision to invest will be determined by the quality of information provided and the benefits that this product will bring to the American consumer.

In your presentation you should include the following information:

Harvest method – How is your crop harvested?

Process of production – How the product from your selection is produced?

Product benefits – How the product you selected will benefit the public?



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