

READY-MADE RESOURCES

Soy Protein and World Hunger

name: _____

date: _____

class: _____

Welcome, teachers, to your guide for successful student completion of the Soy Protein and World Hunger Student-Led Assignment, a webquest designed to help you further explore this topic. Your students will want to save a copy of this assignment to a cloud storage platform, flash drive or computer. They will follow your directions for submission of their assignment.

Before students begin this activity, they will need a computer with internet access and a writing utensil. Students will complete the assignment by visiting each of the linked items and answering the following questions.

Activity 1: Learn about careers in the industry

Watch [this video \(grownextgen.org/career-videos/video/international-agriculture-development/\)](https://grownextgen.org/career-videos/video/international-agriculture-development/) about International Agriculture Development, one of the many careers in Global Agriculture. While you watch the video, answer the following questions:

1. What are some of the benefits of foods high in protein such as soybeans?
 - build muscle
 - create a healthy immune system
 - develop strong bones
 - all of the above
2. Where does Ohio rank in terms of soybean production in the U.S.?
 - 5th
 - 6th
 - 7th
 - 8th
3. What is the projected population by 2050?
 - 5 billion
 - 7 billion
 - 9 billion
 - 11 billion
4. Which of the following are ways that students can be involved in international agriculture?
 - talk to older students and professionals about opportunities to get involved
 - start or join a club that is working on the issue of world hunger
 - connect with a “sister” school in another country
 - all of the above
5. Think about what a career in international agriculture development might involve. If you had this job, would you solve simple or complex problems? Would you focus on local or world-wide agricultural issues? Would the job involve travel? How might these careers involve using soybeans to meet global needs? After thinking about those questions, write a few descriptive sentences about what a career in international agricultural development might be like.

Your students' answers should include items such as: solving complex problems, world-wide agricultural issues, travelling around the world, assessing needs and setting up ways to meet those needs, transportation of soybeans around the world

Activity 2: Explore the issue

Complete the **“Soy Protein and World Hunger” e-learning course** (elearning.grownextgen.org) on global hunger and the need for cheap sources of protein. They should take a screenshot of their posttest results and email it to you.

Reflection: After completing the e-learning course, students should record 5 interesting facts about soybeans and their impact on world hunger. For example, “Soybeans are the only complete source of protein, containing all 9 amino acids. Therefore, they are an excellent source of protein for developing nations whose citizens might not be receiving enough protein.” (They may keep this fact, but must collect 5 others; this example does not count toward their 5 facts).

Answers will vary.

Activity 3: What can be done?

1. World Hunger is the issue. Who is addressing it and how? WISHH is one organization that is trying to address this problem. Visit wishh.org/what-we-do/origins-mission-vision/ to find out what they do. What is the mission of WISHH?

WISHH develops agricultural value chains in emerging markets, creating trade and long-term demand for U.S. soy.

2. Go to wishh.org/soy-resources/soycows-vitagoats/ to see how they do it. Explain the difference between a vitagoat and a soycow.

A “SoyCow” is a processing system that can grind and cook whole soybeans into soymilk, from which beverages, soya “cheese” (tofu), yogurt and other soy foods can be made. The SoyCow can process 4 pounds of raw soybeans into 4 gallons of nutritious soymilk in about 20 minutes.

The VitaGoat is a food processing system that can be used to create value-added products from cereals, grains, nuts, fruits and vegetables, enabling local groups to increase food security, improve health and create micro-businesses and employment. Primary foods can be processed into flours, pastes or wet slurries and used “as is” or further cooked with steam, as for soymilk and its various derivatives. Cooked foods can also be used “as is” or pressed in a manual filter press to make juices and energy-dense beverages. The key feature of the VitaGoat is that it can make all of these foods without the need for electricity; grinding is provided through “pedal power” while cooking energy is provided via an innovative and fuel-efficient steam boiler.

3. Watch [this video](https://www.youtube.com/watch?v=3JJ3I9Hs_r4) ([youtube.com/watch?v=3JJ3I9Hs_r4](https://www.youtube.com/watch?v=3JJ3I9Hs_r4)) to see a VitaGoat and projects that have been successful, then watch [this video](https://www.youtube.com/watch?v=Cnqto78PHzg) ([youtube.com/watch?v=Cnqto78PHzg](https://www.youtube.com/watch?v=Cnqto78PHzg)) to see how a soy cow works. You work for a non-governmental organization. You have been tasked with choosing one country to provide either a soy cow or a vitagoat. Below is the list of the top 16 countries suffering from malnutrition and hunger.

- Angola
- Burundi
- Central Africa
- Chad
- Democratic Republic of Congo
- Equatorial Guinea
- Eritrea
- Ethiopia
- Kenya
- Mali
- Niger
- Sierra Leone
- Somalia
- South Sudan

Look up information about the country of your choice: their capital, their population, jobs, standard of living and where they live (cities, villages, etc). Use sources such as: **CIA World Factbook** (cia.gov/library/publications/the-world-factbook/), **FAO stats** (fao.org/statistics/en/) or other reliable sources (United Nations, etc—not Wikipedia),

Which would you recommend for your chosen country to get: a vitagoat or a soy cow? Explain your reasoning.

Answers will vary.