



Understanding Food Webs And CLAIM, EVIDENCE, REASONING, REBUTTAL How are Feral Pigs Upsetting The Food Web?

Students will cut and paste 3 separate food webs to understand how energy is circulated through the food chain. The third food web is one which includes a top predator, the feral pig. Feral pigs are an invasive species that have become a nuisance in many states and the problem is only spreading. Once the students have constructed their food webs they will read an article on Feral Pigs and how they are affecting our ecosystem. When the students have read the article and studied the attached graphs, they will write an argument answering the question: How are feral pigs upsetting the food web? They will use the attached C.E.R.R Rubric.

Includes:

- 3 cut and paste food webs
- CERR article
- 2 data sources
- CERR Poster/Template
- CERR Form

Blue Green Algae



Water Flea



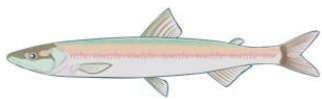
Zebra Mussel



Yellow Perch



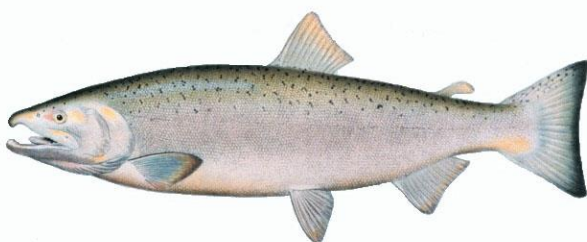
Rainbow Smelt



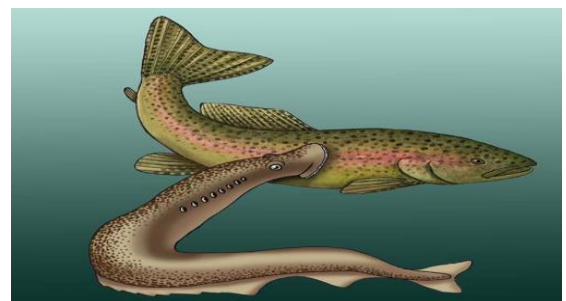
Lake Trout



Coho Salmon



Sea Lamprey



Blueberry Bush



White Oak



Carpenter Ant



Snail



Box Turtle



Wood Frog



Raccoon



Turkey Vulture





Name: _____ Date: _____ Hour: _____

How are Feral Pigs upsetting the food web?

I have never seen a feral pig but if you live in Texas and many southern states feral pigs are becoming so overpopulated they are upsetting natural habitats. Wild pigs go by the names wild boar, wild hog, Eurasian boar and feral swine. They are an invasive species to the United States. Hogs were introduced to the United States back in 1539 by the explorer Hernando De Soto. He brought the pigs to Florida and they were used for a food source. When the pigs were allowed to roam free and when early settlers left their settlements many of the pigs stayed and became undomesticated or wild. They adapted well to the warm environment of the South and slowly populated. Wild hogs can produce litters up to two times a year and have 5 to 6 piglets per litter. The hogs are opportunistic and will eat most anything. Some of the food they are fond of are nuts and berries, whole fields of agricultural crops including corn, wheat, potatoes, vegetables and any fruit. They will also eat small animals and the eggs of birds who nest on the ground. A common problem is wild hogs eating the eggs of wild turkeys and the eggs from a bird called the bobwhite. (Retrieved from [www.https://smithsonian.mag.com/science-nature/a-plague-of-pigs-in-texas](http://www.smithsonianmag.com/science-nature/a-plague-of-pigs-in-texas).)

In the 1930's wild boars from Europe were also introduced in Texas. The boars were favored by hunters because of their intelligence and their cunning in the field. This challenged the hunters and they favored the hogs as game but this also led to problems in containing the hogs. The hogs are intelligent, adaptable and fertile which means they can easily escape human predation. There are no natural predators for the feral pigs. Humans are the main predator and therefore the hogs have increased dramatically since the 1980's. Hunters have been known to take the hogs from other states and "plant" them in "hog free" states for hunting. "Thirty years ago, there were no feral swine sightings reported in Michigan. By the end of 2011, more than 340 feral swine had been spotted in 72 of Michigan's 83 counties." (Retrieved from <http://www.Michigan.gov/dnr/feralswine>)

Wild pigs are very destructive and it is estimated that they can cause 1.5 billion dollars each year in damages to property, agriculture and ecosystems. In 2013 there were thought to be 5 million wild hogs in the United States. New research estimates the count to be at 9 million. In the 1980's most of the wild pigs were contained to Texas and Florida. Scientists are still studying why they are starting to over populate in other states. In February of 2017 it was estimated that there are 2.5 million wild pigs in Texas alone.

Some ways that natural resource scientists are using to decrease the populations of wild hogs are by allowing hunting, trapping, shooting, and catching of the hogs. Scientists are also testing a birth control compound for the hogs. This can be difficult because other animals could ingest the compound. Some poisons have been used but this could also create toxins to other animals and harm the environment.

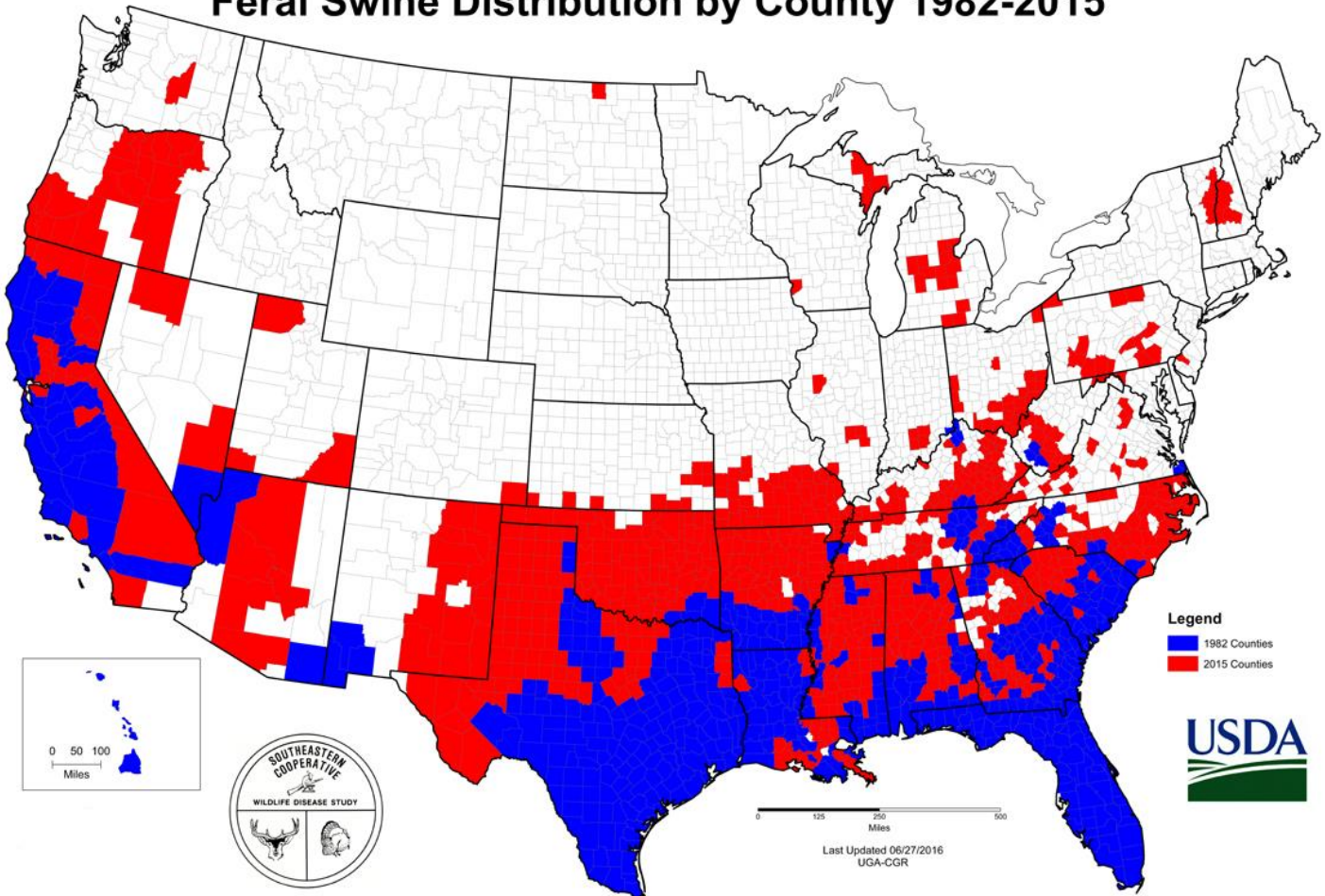
When studying the graphs below we can see how the wild hogs are upsetting the food chain. When they scavenge for food they harm valuable resources. The respondents to the survey claimed that wild pigs had damaged turkey and quail nests, the habitat, and food plots. The crops that were most affected were corn and peanuts and the wildlife most affected were white tailed deer bobwhite quail and wild turkey. The pigs are eating and destroying the food sources important to other wild life and altering the food chain. They are causing population decrease in other wild life because they are eating the animals eggs and also contaminating their water sources. Many deer and turkey will move to other areas just because the wild pig has over taken their habitat.

- Use the following format to write a Claim, Evidence, Reasoning, Rebuttal argument answering the question:
How are Feral Pigs upsetting the food web?
- Make sure to include data from the reading, population graph, and survey.

Name: _____ Date: _____ Hour: _____

How are Feral Pigs upsetting the food web?

Feral Swine Distribution by County 1982-2015



How are Feral Pigs Upsetting the Food Web?

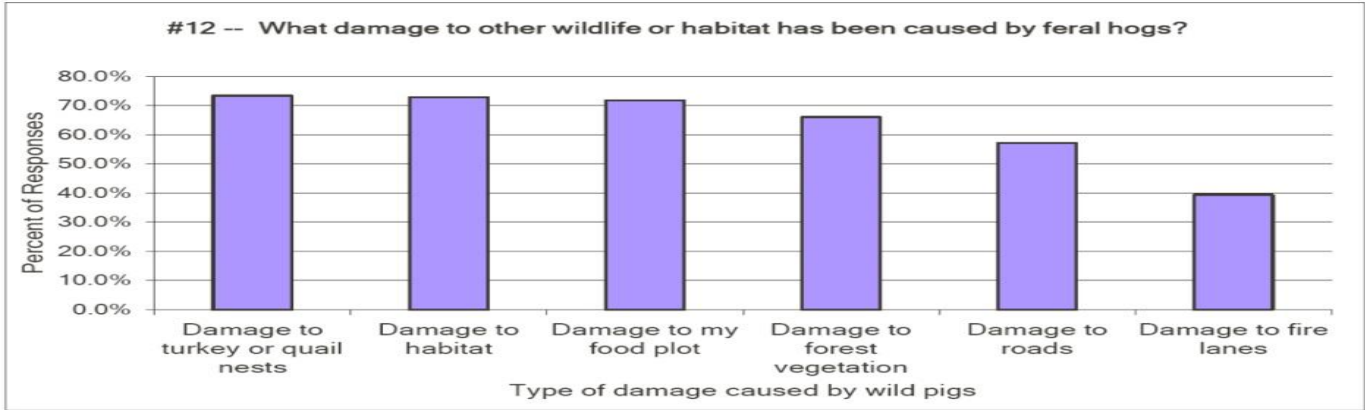


Figure 9. Major types of damage (% of respondents reporting each type of damage) attributed to wild pigs by 191 respondents to this question in the southwest Georgia wild pig mail survey administered between 23 January 2012 and 15 March 2012.

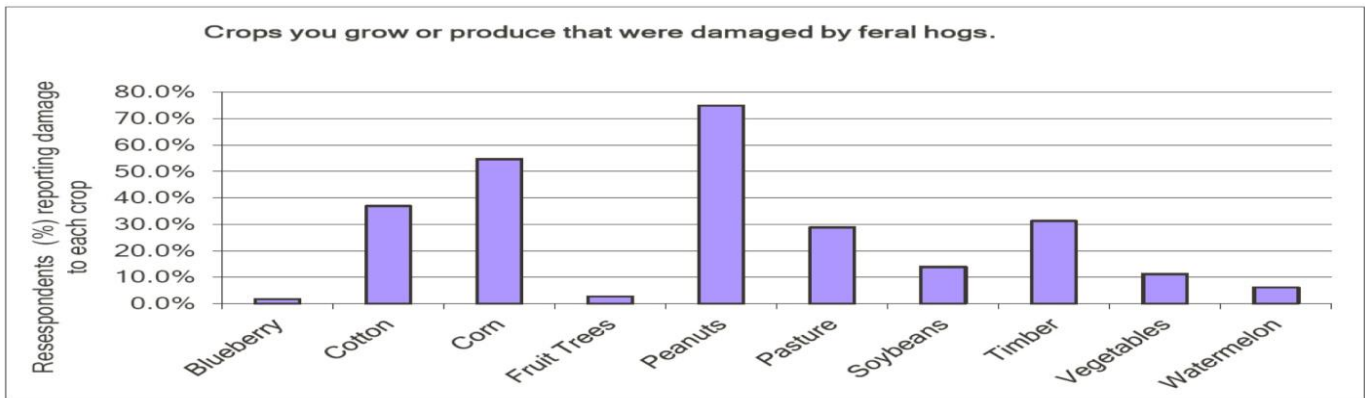


Figure 4. Frequency (%) of crops reported damaged by wild pigs in southwest Georgia based on 295 responses provided people who replied to this question. Survey was conducted between 23 Jan 2012 and 15 Mar 2012 in 41 counties of the SW Cooperative Extension District in Georgia, USA.

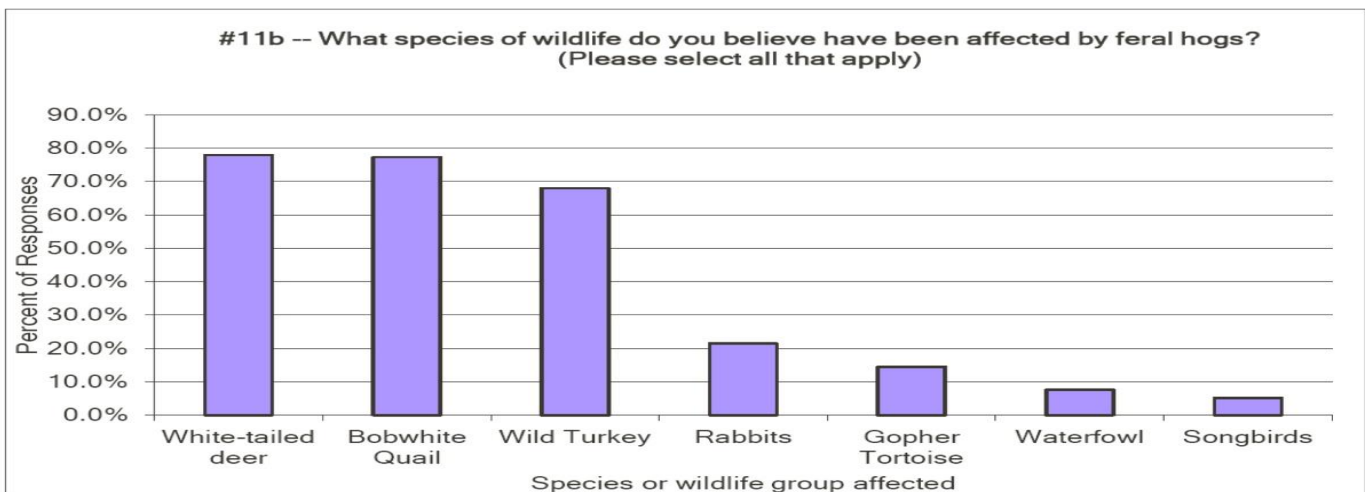


Figure 8. Wildlife species or group of species reported to be negatively affected by wild pigs based on 172 responses received from landowners and agricultural producers in the southwest Cooperative Extension District, Georgia, USA. Survey was conducted between 23 January 2012 and 15 March 2012.

(Graphs retrieved from: <https://jagerpro.com/wild-hog-damage-and-disease/>

Name: _____ Date: _____ Hour: _____

C.E.R.R: Claim, Evidence, Reasoning, Rebuttal for Explaining Scientific Concepts

QUESTION:

CLAIM:

EVIDENCE:

REASONING:

REBUTTAL:

Name: _____ Date: _____ Hour: _____

C.E.R.R: Claim, Evidence, Reasoning, Rebuttal for Explaining Scientific Concepts

QUESTION:

How are Feral Pigs Upsetting the Food Web?

CLAIM:

EVIDENCE:

REASONING:

REBUTTAL:

C.E.R

Claim, Evidence, Reasoning Explaining Scientific Concepts

QUESTION:

State a question you are trying to answer. Answer the question using C.E.R.R strategy.

CLAIM:

A statement or conclusion that answers the original question or problem. Restate the question and make your claim about the question.

EVIDENCE:

Data that supports your claim. Use factual data from proven scientific research or experimentation. What is your evidence?

REASONING:

A justification that connects the evidence to the claim. Why does your data count as evidence? Why does your evidence support your claim? Incorporate scientific principles into your reasoning.

REBUTTAL:

State a counter argument to your claim. How could this claim be argued against? Are there other opinions and evidence different from your claim?