

# Tasty Pork Appetizers and Sustainable Farming





### **LESSON OBJECTIVES:**

The student will

- Identify improved farming strategies that have increased nutrition and sustainability in pig farming.
- Demonstrate safe food preparation.
- Prepare appetizers with pork as main protein ingredient.

**GRADE LEVEL:** High School Culinary Classes,

**LESSON LENGTH:** 4 class periods (45 minute classes)

### **NATIONAL FCS STANDARDS:**

- Demonstrate food safety and sanitation procedures.
- Investigate the technological influences on food choices and practices.
- Evaluate practices that impact food security, sustainability, food integrity, and nutrition and wellness of individuals and families.

### **PROSTART OBJECTIVE:**

- Define the term sustainability.



# Day 1

Sampling snack foods made from pork will kick off this lesson. The pork that consumers enjoy today is very different from the pork that was produced decades ago. Students will learn what pig farmers are doing to raise healthier animals.



## *Activity:*

### **SNACK TASTE TESTING**

Without indicating what today's lesson will be, ask students what these food items have in common: salami, ham sticks, jerky, prosciutto, and pork rinds.

Answer: pork products

- Students taste test salami, ham sticks, jerky, prosciutto, and pork rinds.
  - Have you tried all of these before?
  - Which snacks did you like?
  - Which snacks did you dislike?
  - How could you use each of snack?
- The pork that consumers enjoy today and is sold in supermarkets or served at restaurants is lean, nutritious and great tasting.
- Generate class discussion by asking:
  - What are pig farmers doing to raise a healthier pig?
  - What type of pork do you eat: at home? when at a restaurant? at social events you attend (i.e. receptions, cook outs, graduation parties)?

## *Activity:*

### **K-W-L SUSTAINABLE FARMING**

- Investigate what students know about sustainable farming by completing the "Know" and "Want to Know" categories on this chart. (Chart on next page)
- Share students responses with class.



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# **K-W-L**

## SUSTAINABLE FARMING

| <b>K</b><br>What I <b>K</b> now about<br>sustainable farming | <b>W</b><br>What I <b>W</b> ant To Learn about<br>sustainable farming | <b>L</b><br>What I Have <b>L</b> earned about<br>sustainable farming |
|--|---|--|
|  |   |  |



### *Activity:* WHAT IS SUSTAINABLE?

- Watch Relationship Between Consumers + Farmers  
<https://www.youtube.com/watch?v=Ox5FgMrvyuY>
  - Discuss major facts from video.
- To assist students with understanding what “sustainable” means, start with relevant examples that relate to short-term sustainability.
  - Initiate discussion with relevant examples for students that relates to sustainability short-term.
  - Does class treasury have enough to sustain them through high school (i.e. cover homecoming, prom, graduation expenses, etc.)

OR

If they have a vehicle are they earning enough money to sustain that ownership (i.e. cover costs of insurance, gas, car payments, maintenance bills that occur)

- The questions considered were about the “here and now”. Sustainability is focused on long-term impact. Let’s consider some examples that may have long-term impact on our environment and global community.
- Teacher will cut apart the eight topics provided on the “Which is More Sustainable?” handout (Next page) and distribute to groups of students to discuss which

### *Teacher Notes:*

- This exemplifies how what one individual may believe is sustainable may not be in agreement with another individual. Sustainability focuses on what actions ought to be taken to assure that our natural resources will be here for future generations to enjoy.
- These topics are discussion starters, there may not be a clear cut answer.

choice is more sustainable.

- Discuss the pros and cons of each viewpoint. When in a discussion with varying viewpoints what resources are available to check validity of statements being made?
- Students share their topic and opinions with class.
- Discuss why sustainability is an important issue? Where else besides in agriculture are discussion taking place regarding sustainability (i.e. clothing production, consumer pace of using disposable goods)
- Revisit video from beginning of activity. Students will discuss what might be some sustainability issues farmers face?



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# **WHICH IS MORE SUSTAINABLE?**

1. **paper or plastic?**
2. **watering your garden with a sprinkler or watering your garden with a sprinkling can?**
3. **eating strawberries grown locally or eating strawberries from California?**
4. **buying in bulk or buying individual packages?**
5. **getting carry-out for dinner or cooking at home?**
6. **eating a fruit with a bruise or throwing it away?**
7. **throwing food scraps in the garbage can or composting food scraps?**
8. **bringing home groceries in a paper bag or a cloth bag you brought from home?**





### *Activity:*

#### **WHAT DO I THINK? WHAT DO I KNOW?**

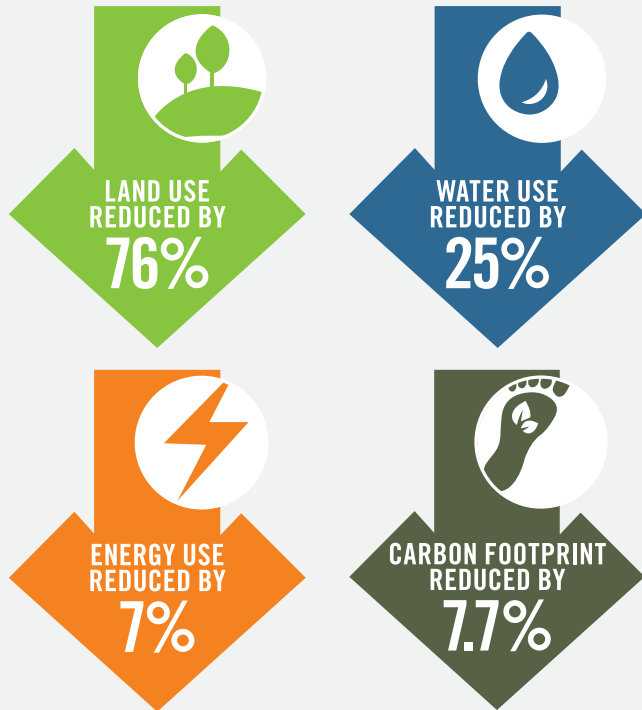
- Use Quizizz.com or worksheet provided (Quizizz “Sustainable Pig Farming”).  
<https://quizizz.com/admin/quiz/5da7c4a6ffde79001b5862b2/sustainable-pig-farming>
- Students will review the answers. Circle those responses they know for a fact versus what they think they might know (opinions).
- Students compare their responses with a partner, place an asterisk where differences occur. Circled responses would indicate there is one or more resources available to document this fact. If partners have different answers compare resource(s) that documents validity of response.
- Discuss as a class and draw conclusions about what is sustainability.

### *Teacher Notes:*

- Quizizz.com is a free tool. It works on any device: web browser, iOS, Android and Chrome apps. You can access hundreds of ready-made learning quizzes or create your own. Join as a teacher, pick a quiz, and use the code for a virtual room to give to your students.
- If you do not have an account, you will need to create one. After you have created an account, type in “Sustainable Pig Farming.” Use the [Quizizz.com](https://quizizz.com) site to locate pre-assessment quiz.

# U.S. SUSTAINABILITY KEEPS IMPROVING

IMPROVEMENTS PER POUND OF PORK PRODUCED  
(FROM 1960 TP 2015)<sup>2</sup>



## Activity:

### A HISTORICAL PERSPECTIVE

- Sustainable farming is often a topic of conversation, so let's investigate that more closely. Watch the video <https://youtu.be/8UdpoiCtnTs> (55-Year Look Back Study)
- After watching the video, ask students to discuss as a class, what are 3 facts that they learned?

## Activity:

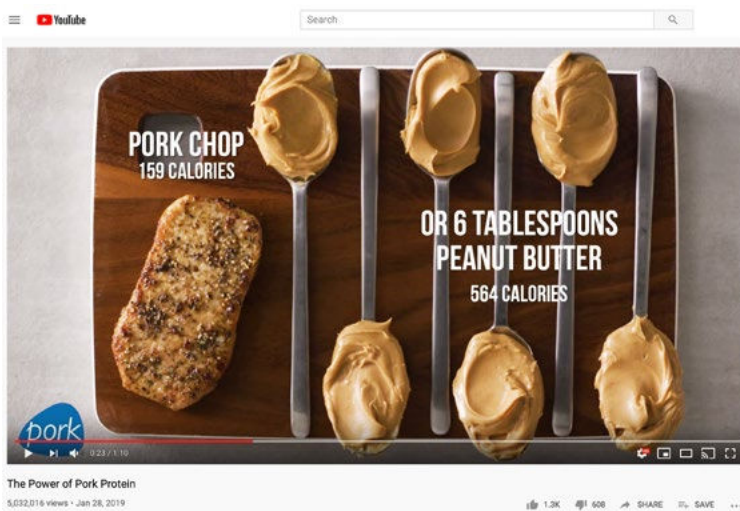
### THE POWER OF PORK VIDEO

- Watch <https://www.youtube.com/watch?v=RKS2ibrKQyk> (The Power of Pork)
- Discuss as a class how the pork we eat today differs from decades ago (i.e. today pork has 16% less fat and 27% less saturated fat as compared to 1991)."
- Discuss how pig farmers have been able to make changes to produce leaner pork (i.e. changes is what pigs are fed, how pigs are raised, breeding of pigs)."

## Activity:

### WEBQUEST

- Hand out "Sustainable Pig Farming" Webquest. (Next page)
- Read introduction to the class.
- Watch Sustainability with New Fashion Pork <https://www.youtube.com/watch?v=Ikzong5SPUk&t=41s>
- Utilize suggested links on webquest chart.
- Students will return to class next day with Webquest completed. Teacher will collect to review







# SUSTAINABLE PIG FARMING WEBQUEST

**Introduction:** We all want to eat healthy and nutritious foods that make us feel good, but don't want to sacrifice flavor or convenience to do so. The pork that consumers enjoy today is very different from the pork that was produced decades ago. In fact, lard was one of the main products used from pigs; the meat was less desirable. Fast-forward to today. The pork sold in supermarkets and served at restaurants is lean, nutritious and great tasting. This dramatic shift is the result of farmers and food animal experts working together to raise a different kind of pig with characteristics that consumers want. What are pig farmers doing to raise a healthier pig while promoting a more sustainable environment for future generations?

**Directions:** Use the following links to discover sustainable farming techniques used by pig farmers. You need to focus your attention on three components: human and animal health, environment, and community.

- <https://www.pork.org/about/we-care/>
- <https://www.pork.org/blog/todays-pig-farming/>
- <https://www.pork.org/facts/pig-farming/6-things-you-dont-know-about-u-s-pig-farms/>

### Pig farmers are practicing more sustainable farming techniques.

List examples of sustainable practices in each component.

| Human and Animal Health | Environment | Community |
|-------------------------|-------------|-----------|
|                         |             |           |

# Day 2

Pig farmers are committed to producing safe food, and protecting the well-being of their animals while safe guarding natural resources. Students will learn about the pork industry with online resources.

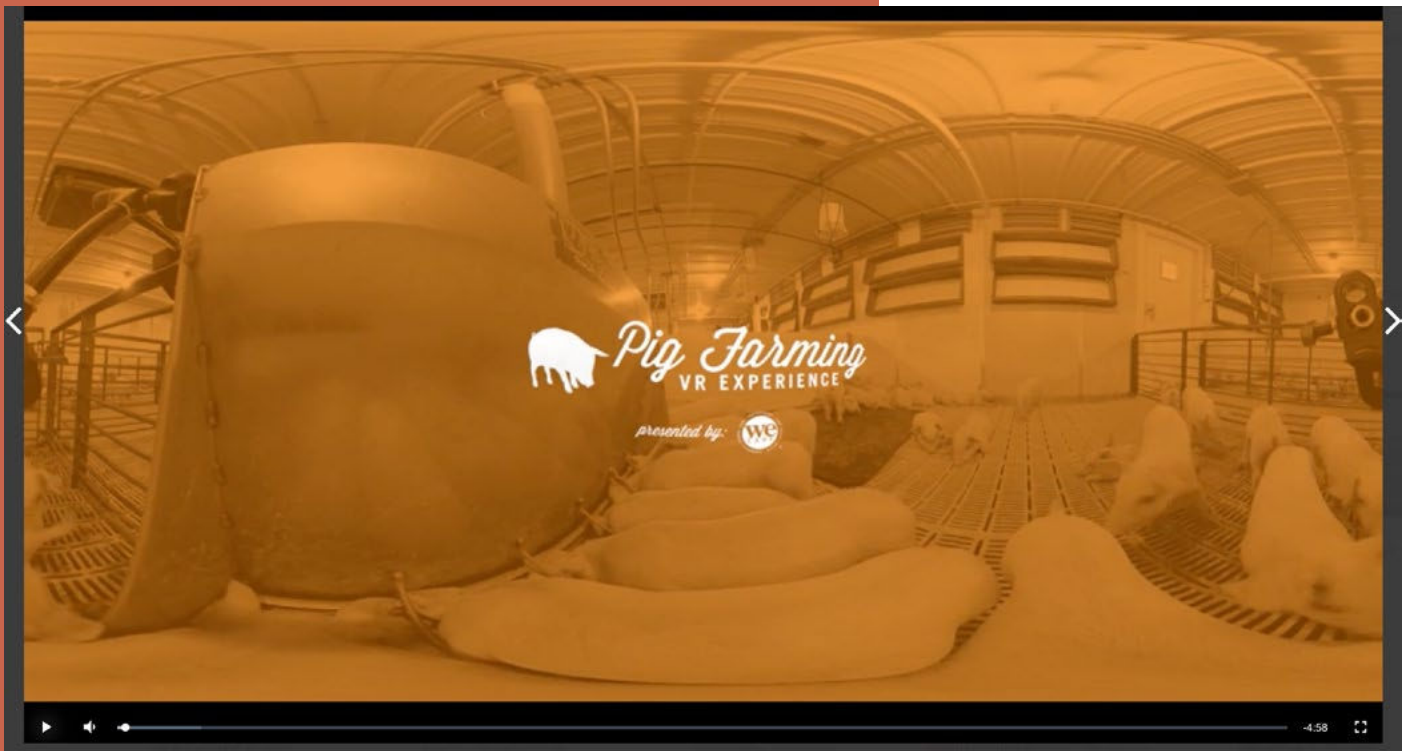
Check out the We Care website for farmer's ethical principles.

## *Activity:*

### **VIRTUAL FIELD TRIP OR RECORDED FIELD TRIP**

(if technology is limited)

- Go to either:
  - <http://www.wppa.org/fieldtrip/> or
  - <https://youtu.be/cQ-5F-gT-6c>
- Discuss how pigs are raised and produce a nutritious product for consumers.
- Divide students into groups and have each group identify their top three sustainable issues that pig farmers face.
- Use “Processing Sustainable Issues” with students to further their understanding of challenges pig farmers are addressing. (Next page)





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*Activity:*

# PROCESSING SUSTAINABLE ISSUES

Problem solvers should ask questions and engage in dialogue. Why? Problem solvers often are leaders and need to determine what ought to be done or the best course of action to take regarding recurring issues. Problem solvers must consider questions of: context, long-term goals, strategies and consequences.

|  |  |
|--|--|
| <b>Recurring Issue –</b><br>What ought pork producers do to sustain our land and other resources for future generations?   |  |
| How does/might sustaining our land and other resources impact individuals, communities and the global population?  |  |
| <b>Resources –</b><br><a href="https://www.pork.org/environment/sustainable-pig-farming/">https://www.pork.org/environment/sustainable-pig-farming/</a><br><a href="https://www.nal.usda.gov/afsic/sustainable-agriculture-0">https://www.nal.usda.gov/afsic/sustainable-agriculture-0</a>   |  |
| <b>Types of Questions To Investigate</b><br>(there are four types – context, goal/valued end, strategies and consequences)   | Site resource(s) used when responding to each type of questions and your thoughts based on fact finding. |
| <b>Context – Identifies the existing state of affairs</b><br><b>Questions of Context –</b><br>What is going on?<br>What is the (perceived) issue?<br>Who is involved? People? Organizations?<br>What has happened in the past regarding issue?<br>How is this issue viewed by those directly involved? By Others? By you?<br>Other questions of context to consider?   |  |
| <b>Goals / Valued Ends – Identifies the desired state of affairs</b><br><b>Questions of Goals / Valued Ends –</b><br>What is the ideal solution or outcome in this situation?<br>What do you want to happen?<br>What do other individuals/groups want to happen?<br>What does society want to happen?<br>Why do you or others want this? Your reasoning?<br>What would be the best for everyone involved?<br>Other questions to consider regarding goals/valued ends |  |

**Activity continued on next page»**



|   |   |
|---|---|
| <p><b>Types of Questions To Investigate</b><br/>(there are four – context, goal/valued end, strategies and consequences)</p>  | <p>Site resource(s) used when responding to each type of questions and your thoughts based on fact finding.</p> |
| <p><b>Means / Strategies – Possible ways to accomplish this goal</b><br/>Questions of Means / Strategies –<br/>What needs to be done?<br/>Who will take action?<br/>What steps need to happen?<br/>What valid and reliable information can be used to address this recurring issue?<br/>What are alternative approaches to solve the issue?<br/>Other questions regarding strategies</p>      |   |
| <p><b>Consequences – Positive and negative outcomes</b><br/>Questions of Consequence –<br/>What are positive effects of action taken?<br/>What are negative effects of action taken?<br/>What are short-term effects?<br/>What are long-term effects?<br/>How would the consequence impact individuals?<br/>Community? Global population?<br/>Other questions of consequences to consider</p> |   |
| <p>Judgement – to reach a decision through processing the facts and responding to all four types of questions.</p>  |   |
| <p><b>Recurring Issue –</b><br/>What ought pork producers do to sustain our land and other resources for future generations?</p>  |   |
| <p>Based on your fact finding and consideration of all four types of questions describe what you believe ought to happen to address this recurring issue. Share your thought process in 2 or 3 paragraphs, use complete sentences. Word process and attach this document.</p>   |   |
| <p><b>My conclusion is –</b></p>  |   |

# Day 3

Pork appetizers will be prepared in class. Review the online video “Pulled Pork Nachos from Scratch” discussing with students the importance of safety and sanitation standards during food preparation.



## Pulled Pork Nachos

<https://www.yummly.com/recipe/Pulled-Pork-Nachos-2249473>

### *Activity:*

#### **SAFETY & SANITATION**

- Watch Rockin Robbin demonstrate her recipe for “Pulled Pork Nachos From Scratch”. [https://youtu.be/-0EJbIbc\\_tE](https://youtu.be/-0EJbIbc_tE) (video 7:38 minutes).
- Team up with a partner and record what you see her doing regarding:
  - Sanitation standards she does and does not meet
  - Safety rules Robbin follows
  - Safety hazards you observed
- After video discuss questions as a class
  - Additional sanitation questions – How long would you leave these nachos out at room temperature? How would you store the leftovers? (be specific) The pork cooked for 4 to 6 hours, what temperature needed to be maintained?
  - What other food prep safety rules came to mind when watching video?
  - Think about the ingredients Robbin had prepped and ready to go into the slow cooker. What cutlery/utensil is most appropriate for prepping: minced garlic, trimming pork butt, coarsely grated cheese, diced Jalapeno peppers, and avocado?

### *Teacher Notes:*

- Sanitation standards may include: securing hair in place during food prep, sanitizing work surfaces, wearing jewelry and street clothes during food prep, appropriate length of nails, sanitizing cutting board after each use, length of time meat is at room temp prior to cooking, etc.
- Safety rules may include: cutting away from oneself, using hot holders when removing pans from oven, using knife to fit size of task, cutting & chopping on cutting board that is secured on counter, slow cooker located away from sink, etc.



**Pork And Scallion Pot Stickers**

<https://www.yummly.com/recipe/Pork-And-Scallion-Pot-Stickers-2261240>

*Activity:*

**REVISIT K-W-L SUSTAINABLE FARMING**

- Refer back to the K-W-L chart used on Day 1.
- Students fill in the third column – “What I’ve Learned about sustainable farming.”
- Students identify two online resources that were most helpful when learning about pig farmers and sustainability.
- Turn in K-W-L activity for teacher review.

*Activity:*

**PREPARING PORK**

- Divide students into groups for appetizer lab.
- Students select an appetizer recipe, note the pork product being used. Identify the pork cut associated with that product.
- **Pork Cuts** <https://library.pork.org/media/?mediaId=5898C009-3773-4323-868E904602808E88>
- Prep for lab by completing one “Pork Appetizer Lab Plan” per group.





**Pork Tenderloin Sliders with Three Sauces**  
<https://www.yummly.com/#recipe/Pork-Tenderloin-Sliders-with-Three-Sauces-2248737>

## APPETIZER RECIPE OPTIONS

**Pork Tenderloin Sliders with Three Sauces** (25-30 minutes, plus sauces)  
Yogurt-Lime Sauce, Goat Cheese-Basil Sauce, and Spicy Avocado Sauce (additional)

<https://www.yummly.com/recipe/Pork-Tenderloin-Sliders-with-Three-Sauces-2248737>

<https://www.yummly.com/recipe/Yogurt-Lime-Sauce-2249427>

<https://www.yummly.com/recipe/Goat-Cheese-Basil-Sauce-2248087>

<https://www.yummly.com/recipe/Spicy-Avocado-Sauce-2249307>

**Bacon and Mushroom Bite-Size Quiche** (45 min)

<https://www.yummly.com/recipe/Bacon-and-Mushroom-Bite-Size-Quiche-2247791>

**Ham and Green Chile Bite Size Quiche** (variant of same quiche recipe)

<https://www.yummly.com/recipe/Ham-and-Green-Chile-Bite-Size-Quiche-2248384>

**Ham and Smoked Gouda Biscuits with Maple Butter** (60 minutes)

<https://www.yummly.com/recipe/Ham-and-Smoked-Gouda-Biscuits-with-Maple-Butter-1585337>

**Stuffed Pork Meatballs with Romesco** (45-50 minutes)

<https://www.yummly.com/recipe/Stuffed-Pork-Meatballs-with-Romesco-1879307>

**Sweet and Sour Cocktail Meatballs** (45-50 minutes)

<https://www.yummly.com/recipe/Sweet-and-Sour-Cocktail-Meatballs-2249055>

**Baked Pork Egg Rolls** (35-45 minutes)

<https://www.yummly.com/recipe/Baked-Pork-Egg-Rolls-2247920>

**Pork And Scallion Pot Stickers**

(45-50 minutes)  
<https://www.yummly.com/recipe/Pork-And-Scallion-Pot-Stickers-2261240>

**Perfect Day Pork and Black Bean Nachos** (45-55 minutes)

<https://www.yummly.com/recipe/Perfect-Day-Pork-and-Black-Bean-Nachos-1313300>

**Bacon and Boursin Cheese Puff Pizza** (30 minutes)

<https://www.yummly.com/recipe/Bacon-and-Boursin-Cheese-Puff-Pizza-2247814>

**Scotch Eggs** (35 minutes)

<https://www.yummly.com/recipe/Scotch-Eggs-2249412>

**Creamy Herbed Pancetta Spread** (10 minutes)

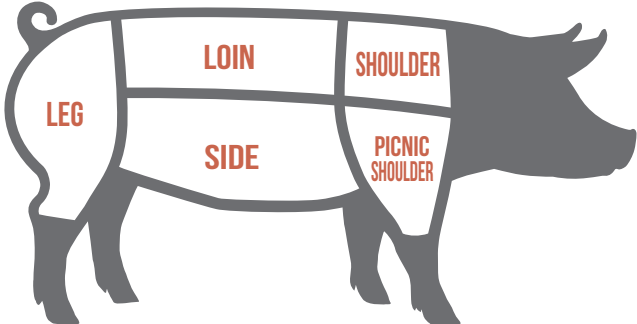
<https://www.yummly.com/recipe/Creamy-Herbed-Pancetta-Spread-2248022>

**Spicy Sausage Hummus with Toasted Pita Triangles** (25 minutes)

<https://www.yummly.com/recipe/Spicy-Sausage-Hummus-with-Toasted-Pita-Triangles-2249514>

# PORK APPETIZER LAB PLAN

**PART A**

| Identification  | My Response   |
|---|---|
| What recipe did your group choose?  |   |
| What is the pork product being used?  |   |
| What cut of pork does this product come from?   |   |
| Search for the nearest location to purchase a cut of this locally grown meat.             |   |
| Identify on the diagram where that cut of pork is located. Color in the correct location. |  |

**PART B--Time to Plan**

| Sequence of Preparation Steps | Student Responsible |
|-------------------------------|---------------------|
|                               |                     |

# Day 4

How is a food prep lab at school like working in a commercial food service kitchen? How is it different? Students reflect upon the skills used while preparing pork in class. How might these skills add to student's resume when applying for a job?



**Stuffed Pork Meatballs with Romesco**

<https://www.yummly.com/recipe/Stuffed-Pork-Meatballs-with-Romesco-1879307>

## Activity:

### PREPARE APPETIZER RECIPES

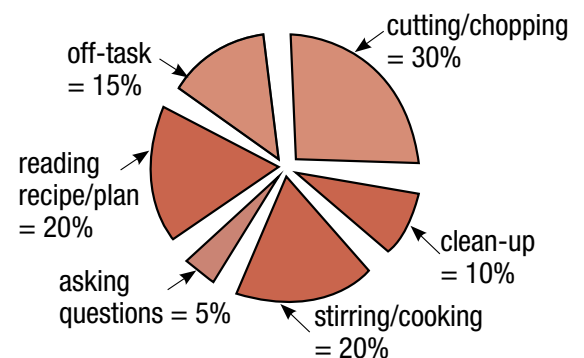
- Lab Assessment



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### PRODUCTIVITY AND ACCOUNTABILITY

Instructions: How did you contribute during the food prep lab? What contributions did you make to your team? Click on the “print” button above to open the worksheet. Using the circle below divide up into a pie chart illustrating your use of time – be specific. Cooking is not specific – a specific example would be ‘chopping onions and green peppers for stew’. See example below. Label each part of your pie chart.







### **OPTIONAL ACTIVITIES TO ENHANCE LEARNING:**

- Student will visit local meat counter or store and interview staff about pork available to consumers. Interview questions could include:
  - what are the most popular cuts of pork with customers?
  - are there seasonal variations on popular pork cuts?
  - what questions do you receive from customers regarding pork cuts and/or preparation techniques?
  - how thick do you cut the chops? what method of cookery do you recommend with this thickness?
  - which do consumers prefer, bone in or bone out of chops? what do you think motivates their preference?
  - what fresh pork is available (has not been frozen)?
  - Student may add additional questions.
  - Students will write 2 or 3 paragraphs sharing what they learned. Include store you visited and person(s) interviewed.
- Invite a speaker:
  - Local pig farmer
  - Meat manager
  - Chef at a local restaurant that promotes pork entrees on the menu
- Student prepares one of the other appetizer recipes for their family

# Resources

## ONLINE VIDEOS:

Relationship Between Consumers + Farmers <https://youtu.be/H2tXGjxz9gE>

55-Year Look Back Study <https://youtu.be/8UdpoiCtnTs>

The Power of Pork <https://www.youtube.com/watch?v=RKS2ibrKQyk>

Sustainability with New Fashion Pork <https://www.youtube.com/watch?v=IKzonzq5SPUk&t=41s>

Virtual Field Trip <http://www.wppa.org/fieldtrip/> (visit website to sign up)

Virtual Field Tour

<http://www.wppa.org/fieldtrip/> or <https://youtu.be/cQ-5F-gT-6c>

Google: Rockin Robbin Pulled Pork Nachos (video 7:38 minutes) [https://youtu.be/-0EJlbc\\_tE](https://youtu.be/-0EJlbc_tE)

## OTHER RESOURCES:

K-W-L worksheet (see day #1)

What is More Sustainable? (see day #1)

Quizizz Sustainable Pig Farming worksheet (see day #1 for answers) <https://quizizz.com/admin/quiz/5da7c4a6ffde79001b5862b2/sustainable-pig-farming>

Sustainable Pig Farming Webquest\_11\_27\_19.docx (see day #1)

Activity “Processing Sustainable Issues” (see day #2 lesson plan)

<http://porkcdn.s3.amazonaws.com/sites/all/files/documents/Resources/04851.pdf>

<http://porkcdn.s3.amazonaws.com/sites/all/files/documents/Resources/04835.pdf>

Pork Cuts <https://library.pork.org/media/?mediald=5898C009-3773-4323-868E904602808E88>

Lab Plan (see day #3)

Assessment (see day #4)

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# Acknowledgements

## Lesson Plan Initiative funded with Pork Checkoff monies from:

- National Pork Board
- Minnesota Pork Board
- Wisconsin Pork Association

## Steering Committee:

Catherine Lader, Wisconsin Retired FCS Teacher, Project Coordinator

## Education Consultant:

Susan Turgeson, Ed. D., CFCS, University of WI-Stevens Point

## Family and Consumer Sciences Teachers:

Sue Strutz, School District of Wisconsin Dells, WI

Anne Jans, School District of Jordan, Minnesota

Emily Larson, School District of Amery, Wisconsin

Delaine Stendahl, School District of Whitehall, Wisconsin

Jenny Wehmeier, School District of Elkhorn, Wisconsin

