



FLORIDA 4-H TAILGATE¹

Fire-Building

Written By: Chad Carr, Brian Estevez, Sonja Crawford, Jason Scheffler, George Baker, Ed Jennings, and Mark Mauldin²

Introduction

Childhood obesity is a serious public health problem in the US. Today, nearly a third of American children are overweight or obese (CDC, 2015). A contributing factor to childhood obesity is general dependency on prepared food, which is somewhat fueled by our society's dwindling cooking abilities. Many parents do not have the time, or they do not know how to cook, so they have not passed the skill on to the younger generation. The average American knows little about the safe preparation of highly palatable animal protein entrées. Additionally, nutrition research suggests that animal protein in the diet is beneficial to adolescent development (Cleghorn, 2007).

The Florida 4-H Poultry BBQ program has existed for years, and the program for red meat cookery has been a huge success in Tennessee 4-H. With sponsorship for the winners at the state level, the Florida 4-H Tailgate Contest program will be a success in Florida as well. This program will strive to promote enjoyable outdoor cooking experiences, encourage the incorporation of animal protein in the diet in order to combat childhood obesity, improve youth nutritional knowledge and cooking skills, and impart knowledge about safe handling and proper degree of doneness to produce safe and delicious meat dishes.

Learning Activity: Building the Fire

Learning Objective: Youth will learn to safely start charcoal to provide the heat for grilling.

Life Skill: Problem-Solving and Personal Safety

Background

You may want to line your grill with aluminum foil to help protect your grill and make cleanup much easier. If your grill does not have a grate for the charcoal, you may place dry sand or small gravel at the bottom to help the fire "breathe" and burn hotter. If your grill is rounded on the bottom, use the sand or gravel to make the fire base level. If your grill has bottom vents, open them before starting the fire. Select a high-quality charcoal. Higher quality

charcoal briquettes start more easily and burn more uniformly. To determine the number of charcoal briquettes, spread briquettes 1 to 2 inches beyond the area that meat will cover on the cooking rack. Start your charcoals by using liquid starter, chimney starter, or ready-to-light charcoal.

Liquid starter: Arrange the charcoal in a pyramid shape on the charcoal or fire grate. Add the liquid starter according to manufacturer's directions and wait at least 1 minute before lighting with a long stem match or long stem butane lighter.

Chimney starter: You can purchase a chimney starter or make one by punching or drilling holes around a large can. Place newspaper at the bottom of the chimney starter and put charcoal on top of the newspaper. Light the newspaper through a bottom hole.

For more information on starting a fire using a chimney starter, visit <http://www.weber.com/weber-nation/grill-skills/mastering-smoke/using-a-chimney-starter/using-a-chimney-starter>.

Ready-to-light charcoal: These briquettes are pre-soaked with lighter fluid. Arrange in a pyramid shape and light.

Warning: *Never* use gasoline or kerosene to start fires, *never* add starter to hot coals, and *never* grill indoors!

Regardless of the starting method, give all liquid starter fluids time to completely burn off so that the fuel does not add an "off-flavor" to the meat. Coals will be white due to ash cover in about 30 minutes. Once the liquid starter fluids have burned off, evenly spread the coals into a single layer over the fire grate. Most meat cuts are prepared at medium heat. The coals will glow through a thin ash cover. You can tell the approximate level of heat by holding your hand 4 inches over the coals. If you can only keep your hand in that position for 2 to 3 seconds, the coals are hot. If you can only keep your hand in that position for about 6 to 8 seconds, the coals are at medium heat. Finally, if you can keep your hand in that position for 11 or more seconds, the coals are cool. Adjust the air flow or distance from the coals to achieve the desired level of heat.

Do

- Make a chimney starter from a large can.
- Demonstrate proper charcoal starting techniques for each method.
- Determine the approximate coal temperature (2 to 3 seconds = hot coals; 6 to 8 seconds = medium coals; 11 to 14 seconds = cool coals).

Reflect

- What are the different ways to start the fire in your grill?
- Why should the fire from your grill "breathe"?
- Have you ever tasted the "off-flavor" left behind by a liquid starter?

Apply

- Which starter type helped you easily and safely start a fire in order to cook meat outdoors?

Conclusion

Educating youth about ways to safely prepare animal protein on a grill will improve grilling safety, combat childhood obesity, improve the nutritional knowledge and cooking skills of today's youth, and impart knowledge about safe handling and proper degree of doneness in order to produce safe and palatable meat dishes.

For up-to-date information on the Florida 4-H Tailgating Contest, please visit

http://florida4h.org/programsandevents_/animalscience/4-h-tailgating-contest/.

Additional Resources

Florida 4-H Tailgating Contest:

http://florida4h.org/programsandevents_/animalscience/4-h-tailgating-contest/

State 4-H/FFA Meat Judging Contest:

<https://animal.ifas.ufl.edu/extension/youth/meat/state-meat-judging-contest/>

Florida Hog & Ham Program:

<https://animal.ifas.ufl.edu/extension/youth/livestock/hog-and-ham/>

References

CDC. (2015). Childhood obesity facts. Accessed on July 12, 2016. https://www.cdc.gov/healthy-schools/about/index.html?CDC_AAref_Val=https://www.cdc.gov/healthyschools/obesity/facts.htm

Cleghorn, G. (2007). Role of red meat in the diet for children and adolescents. *Nutrition & Dietetics*, 64(4), S143–S146.

¹ This document is 4HASL42, one of a series of the 4-H Youth Development Program, UF/IFAS Extension. Original publication date December 2016. Visit the Ask IFAS website at <https://ask.ifas.ufl.edu/> for the currently supported version of this publication.

² Jason Scheffler, former research associate professor of muscle biology, UF/IFAS Department of Animal Sciences, Gainesville, FL; Chad Carr, professor and state meat Extension specialist, Department of Animal Sciences; Brian Estevez, Extension agent III, Florida 4-H Youth Development Program, UF/IFAS Extension Escambia County, Cantonment, FL; Sonja Crawford, Extension agent III, M.S., 4-H youth development, UF/IFAS Extension Hendry County; Ed Jennings, Extension agent IV emeritus, livestock, and former county Extension director, UF/IFAS Extension Levy County; Mark Mauldin, Extension agent III, livestock and forages, UF/IFAS Washington County, Chipley, FL; UF/IFAS Extension, Gainesville, FL 32611.

An Equal Opportunity Institution. 4-H is the nation's largest youth development organization. Over 230,000 members in the State of Florida help to make up the community of more than 6.5 million young people across America. 4-H is a non-formal, practical educational program for youth. Florida 4-H is the youth development program of Florida Cooperative Extension, a part of the University of Florida/IFAS.

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution authorized to provide research, educational information, and other services only to individuals and institutions that operate in compliance with applicable federal and state non-discrimination laws and policies. For more information on obtaining other UF/IFAS Extension publications, contact your county's UF/IFAS Extension office. U.S. Department of Agriculture, UF/IFAS Extension Service, University of Florida, IFAS, Florida A&M University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Andra Johnson, Dean for UF/IFAS Extension.