



FLORIDA 4-H TAILGATE SERIES¹

Marinades Versus Dry Rubs

Written by Stephanie Clamer McMinds, Brian Estevez, Jereme Johnson, Haylee Linam, Murilo Trimer Morata, Alyssa Schortinghouse, and Nick Simmons²

Introduction

The highlight at any Florida 4-H Tailgating Contest is undoubtedly the food, whether it involves grilled chicken, char-grilled pork, seared beef, or skewered shrimp. While the choice of protein and cooking technique may vary, the seasoning method plays a crucial role in achieving a flavorful and memorable dish. Marinades and dry rubs are two widely used approaches to enhance taste and texture, each offering distinct advantages. Understanding the differences between these techniques is essential for impressing judges and fellow competitors alike.

Purpose

The purpose of this publication is to explain the differences between marinades and dry rubs, what they are used for, when to use them, the pros and cons of both, and what impacts they can have.

The Difference

Marinades are liquid-based mixtures designed to infuse flavor, tenderize, and add moisture to a cut of meat. Dry rubs, on the other hand, are a dry blend of spices and herbs designed to increase flavor and form a crust or bark when cooked. While both marinades and dry rubs are suitable for grilling, they can each achieve a unique flavor profile that will set apart any food if done correctly. Table 1 outlines the highlights of both marinades and dry rubs.

Marinades

Marinades typically include one or more of the following ingredients: acid, oil, herbs, spices, salt, and sometimes even sugar. The most common acids utilized are vinegar and citrus acids. Moisture is added to the cut of meat through the oil and water, while the primary purpose of the acid ingredient is to help tenderize the meat. Acid can break down proteins, which means marinades need hours or overnight application to be effective. However, soaking in the marinade for too long can break down meat to the point of feeling soft and mushy, as the acid works (Jeong et al., 2018; Yusop et al., 2010). Marinades typically can penetrate as deep as a 1/4 inch into the cut, and possibly

even more, depending on how much acid it contains (Coon, 2020; Yusop et al., 2010). While marinades can be used for grilling, they can also be used when roasting, pan-searing, and even boiling meat. Marinades are often best used for lean cuts of meat, including chicken breast, pork loins, and seafood, such as shrimp.

While marinades can add moisture, help tenderize tough cuts, and infuse a cut with complex flavors, they also have their downsides (Coon, 2020). As it is a liquid-based application method, marinating can be messy and potentially lead to uneven flavor penetration. To mitigate this, use a thinner cut of meat, score the surface, and agitate the meat in the marinade to promote even distribution. When agitating, keep in mind not to over-marinate. Ensuring a balanced sauce by combining acids, oils, herbs, and other spices will aid in reducing the effect of acid by diluting it. As a rule of thumb, limit marinating times accordingly (Christensen, 2011):

- Seafood: 15–60 minutes
- Chicken: 2–24 hours
- Steak: Up to 24 hours
- Pork: Up to 24 hours

Marinades that are heavy in sugar and oil can lead to flare-ups if excess liquid drips into the fire. To avoid this, pat the cut of meat dry before cooking it to remove excess marinade. To avoid burning, consider using sugar sparingly in marinades for cuts grilled over high heat. Also, cook over indirect heat first, then finish over direct heat or by searing.

Do not marinate in a metal container since the acidic mixture can react with the metal. It is recommended to use a plastic or glass container and cover with food wrap. Turn the meat occasionally to coat all sides evenly with the marinade. Plastic food bags can also be used: pour in the marinade, add the meat, seal, and refrigerate. Turn the bag occasionally to ensure full coverage of the marinade (Christensen, 2011).

All meat should be marinated in the refrigerator, not in the sink or on the countertop. After removing the meat from the marinade container for cooking, discard any marinade that held raw meat.

Dry Rubs

Dry rubs are usually a mix of salt, pepper, herbs, spices, and sometimes sugar. They do not include liquids and can be applied just minutes or even hours before cooking with them. Dry rubs typically remove moisture from the exterior of a cut, leading to crispier grilling and a crusting of the exterior. A dry rub only penetrates the surface, with flavor remaining on the outside of the cut. As such, a dry rub does not tenderize meat but creates a flavor profile on the exterior (Rao et al., 2019; Vierck et al., 2021). While these can be used for grilling, it is also suitable for roasting. Dry rubs work best on fatty cuts of meat, like brisket, highly marbled steaks, and pork shoulders.

Dry rubs offer a straightforward approach to preparing a cut for the grill, and they also offer simple storage. Since there is no moisture to interfere with searing a cut of meat, a dry rub allows a crust to form on the exterior of the cut, enhancing the flavor profile. Dry rubs do not always adhere well to dry cuts (Rao et al., 2019). Using a binder such as mayonnaise, mustard, or even oil can help the dry rub adhere evenly across the cut. Without applying any binders, the meat could have over-seasoned sections. Though important for even coverage, even distribution alone will not penetrate the surface to provide deep flavor. To achieve this, allowing the dry rub to sit for 30 minutes to a few hours in the refrigerator will help the flavor develop. Flavor can also be improved deeper in the cut by using a brine or injection.

The composition of the dry rub matters. It is easy to create a dry rub that overpowers the flavor of the meat, especially if it is too salty or spicy. Testing the dry rub before applying it can help you balance the flavor profile. Rubs high in sugar content can char and taste bitter if grilled over high heat. To avoid this, grill over medium heat or choose a low-sugar rub and keep a close eye on the cook time (Vierck et al., 2021).

Conclusions

Marinades and dry rubs are two common seasoning techniques used to enhance flavor and texture in grilled meats. Marinades are liquid-based and work by tenderizing and infusing flavor, especially in lean cuts like chicken or seafood. Dry rubs are mixtures of dry spices that create a flavorful crust, ideal for fattier meats like brisket or pork shoulder. Each method has its benefits and drawbacks. Choosing the right one can elevate any tailgate dish.

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Table 1. The Highlights of Marinades and Dry Rubs

| | Marinades | Dry rubs |
|--------------------------|---|---|
| Base | Liquid base | Dry blend |
| Purpose | Add moisture, tenderize, add flavor | Add flavor, form a crust, add texture |
| Application time | Hours to overnight | Minutes to hours |
| Penetration depth | Up to 1/4 inch deep or more with acidic ingredients | Surface-level flavor impact |
| Texture impact | Tenderize tougher cuts through acid breakdown | Minimal impact on texture, primarily through a crispy crust |
| Moisture impact | Add moisture (through oil/water) | Lead to a dry exterior |
| Cuts of meat | Lean meats like chicken breast, pork loin, seafood | Fatty meats like brisket or pork shoulder |

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² Stephanie Clamer McMinds, Extension agent I, family and consumer sciences, UF/IFAS Extension Citrus County, Lecanto, FL; Brian J. Estevez, Extension agent III, Florida 4-H Youth Development Program, UF/IFAS Extension Escambia County, Cantonment, FL; Jereme Johnson, 4-H program assistant, UF/IFAS Extension Escambia County, Cantonment, FL; Haylee Linam, Extension agent I, Florida 4-H Youth Development Program, UF/IFAS Extension Escambia County, Cantonment, FL; Murilo Trimer Morata, former Extension agent I, agriculture and natural resources, UF/IFAS Extension Escambia County, Cantonment, FL; Alyssa Schortinghouse, Extension agent II, agriculture and natural resources, UF/IFAS Extension Citrus County, Lecanto, FL; Nick Simmons, county Extension director and Extension agent III, M.S., agriculture, UF/IFAS Extension Escambia County, Cantonment, FL; UF/IFAS Extension, Gainesville, FL 32611.

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