# The Impact of Premiums on Stall-Free Pork at the Restaurant Level

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In the United States, the pork industry has undergone a series of changes to meet changing production standards. Due to the increased interest consumers have on how their food is raised, many producers are meeting new standards to meet these markets. Companies along the food supply chain have changed some production practices to meet the concerns of their consumers. One change in the pork industry is the phasing out of gestation stalls. Whole Foods, Wendy's, Tyson, and Cargill are a few food-retailers that have implemented transition towards stall-free pork. Many studies have looked at the impact a ban on gestation stalls have for consumers at the retail level but have not looked at the restaurant level. Meat options at restaurants have begun to resemble wine list. Descriptions of the available items have included many credence attributes from the breed, how the animal was fed, and now how they were raised. This fact sheet summarizes research study on the consumer response towards premiums on gestation stall-free pork.

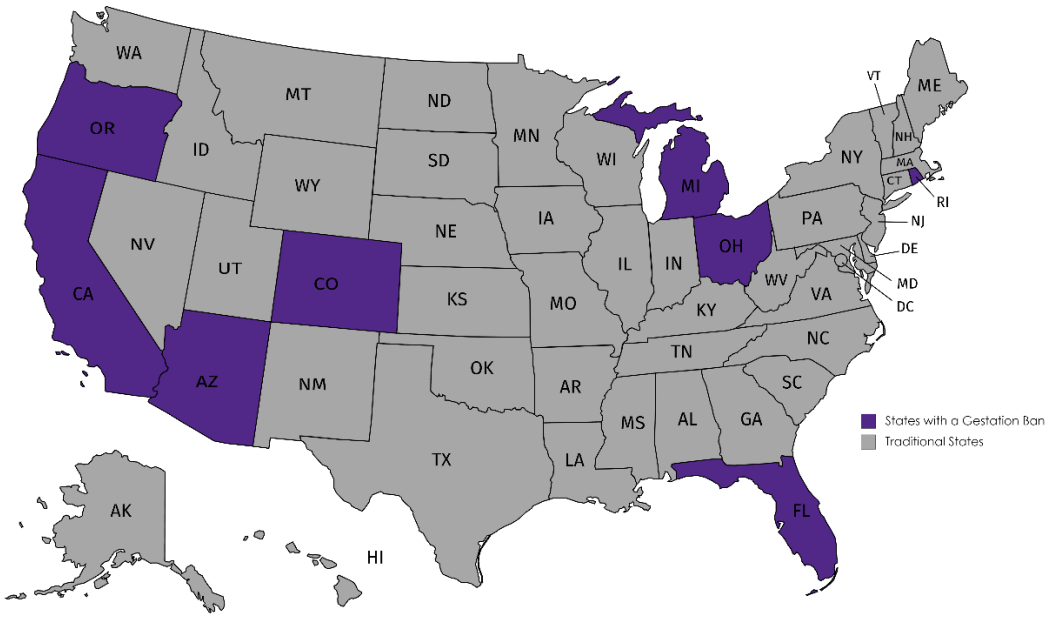
Survey data was collected March 26, 2019 through March 29, 2019. The number of people surveyed were 3343 people where 1301 were directed to an alternative question on restaurant preferences based on how the restaurant food is sourced. Each participant was set up with a scenario where they were presented with selecting a restaurant based on two options. One option was that the restaurant sourced their pork from producers who do not use stalls but operate in a state where stalls are allowed. The opposing option was a restaurant that sources pork from producers who do use stalls. The presented average dinner meal prices varied. Five random values were assigned to the stalled option (based on Longhorn Steakhouse price at the time for two 8oz pork chops, salad, and one side meal at $16.29). The stall-free option was presented with premiums of $0, $2, $4, or $6 to the stalled price.

## Gestation Stall Ban

The gestation stall ban refers to the housing method pork producers use to manage gestating sows. These stalls are typically 2x7 foot stalls that allow producers to monitor individual sows on a large scale. Animal welfare concerns arose based on the limited movement and inability to perform natural behaviors such as rooting. To address this concern, there have been movement away from use of gestation stalls. The greatest movement away from stalls is from bans at the state level. In 2002, Florida

became the first state to pass a ban on gestation stalls. Since then, a total of nine states have pursued the ban and passed via legislation or ballot initiative. Those states include Florida, California, Colorado, Ohio, Michigan, Arizona, Rhode Island, Maine, and Oregon (Figure 1).

**Figure 1: U.S. Map of States with a Ban**




## Implementation of Premiums

To imply the difference between two products, premiums are one way to show the so called, higher standard. This goes very much in hand with how different labels may appear to have higher prices. Premiums are associated with credence attributes. Credence attributes are those that cannot be measured easily and often include characteristics that do not impact taste and flavor directly. For the restaurant level, there are a series of factors that determine the price of a dish, but the protein is the major player. In terms of premiums, higher prices may reflect higher costs due to the increase in cost of implementing a stall-free system.

## Reaction of Premiums

Consumers are provided with options when it comes to purchasing pork, but each of those options come at different prices for various reasons. For the example of stall-free pork, premiums differentiate product options. When consumers are presented with the option of choosing stall-free or traditional pork, we can estimate how consumers react to a difference in prices. Typically, there will be a difference in price but to further identify consumer preferences, a premium of $0 was used as well to see what consumers would prefer in the absence of a price differential. Each additional premium provides an estimation on how sensitive consumers are to their preferences. It is imaginable that as prices increase, fewer consumers would purchase that option, the defining question is at what rate?

## Implications

It is important to note the results of the survey and how the surveyed consumers were distributed across states with and without a ban. Based on the data, 33% of the surveyed participants were from states with a ban. For consumers who were presented with no difference in price, or a premium of zero, most consumers chose the stall-free option (Figures 2 and 3). This implies that consumers may be conscious of animal welfare and feel stall-free pork is more friendly. When premiums for stall-free pork reach six dollars, consumer behavior changes and more participants chose the stalled option than stall-free. Consumer response towards price is held true as prices increase for the stall-free option, more people are less motivated to purchase it. Across all scenarios, 51-54% of the population would select stall-free pork when given the choice.

**Figure 2: Frequency of Participant Choice Based on States with a Gestation Stall Ban**

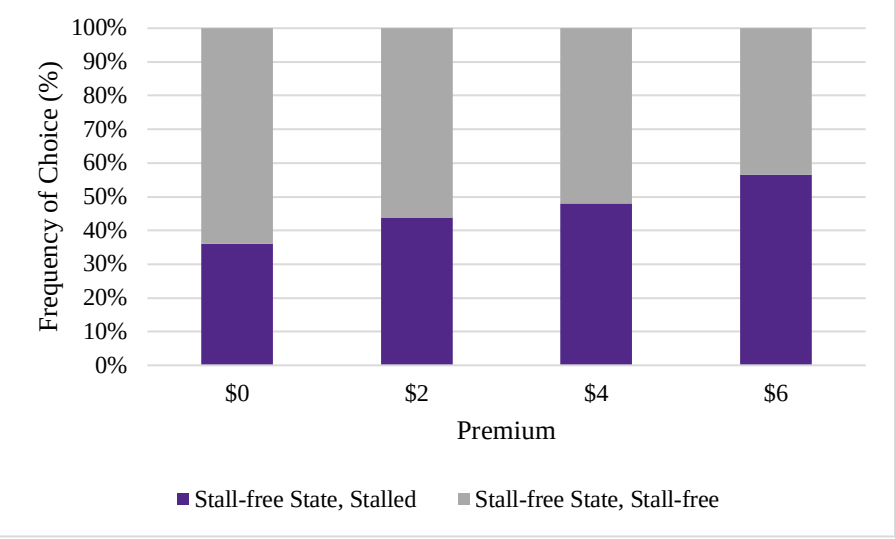
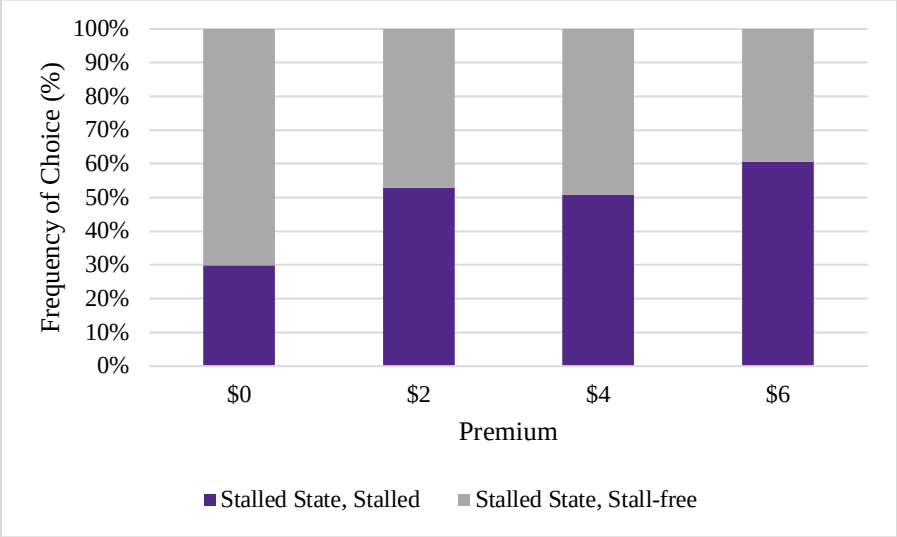
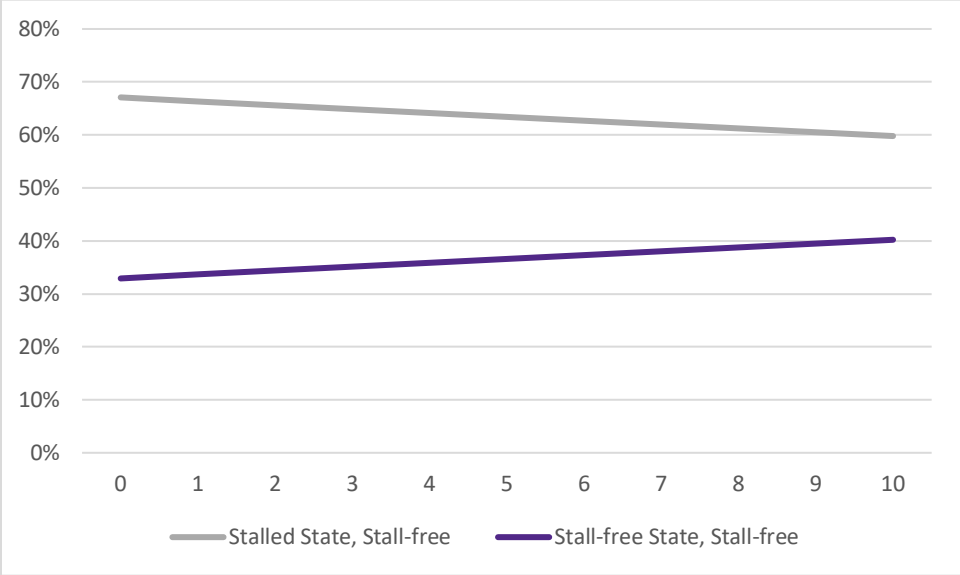


**Figure 3: Frequency of Participants Choice Based on States with Without a Gestation Stall Ban**




Utilizing the survey raw data, we can estimate a predicted value of consumer reactions to additional increase in premiums. As price premiums increase, we see as expected that fewer select stall-free (Figure 3). Since people are less likely to purchase items at higher costs, the rate at which individuals trade off can be estimated though a linear estimation. Individuals in states without a ban are more sensitive to an increase in price. In both cases, there are individuals who would be willing to purchase stall-free pork at higher premiums. The higher willingness to pay for a good implies that they value that attribute (in this case, stall-free pork) above the price. Due to the high capital cost of producing pork in a stall-free system, it would be rare to find a zero premium between stalled and stall-free pork.

**Figure 4: Estimated frequency of consumers selecting stall-free choice.**




## Summary

When a state implements a ban on gestation stalls, it is a ban at the production level and not at the retail level. For states with the gestation stall ban, those producers are directed to transition sow-housing methods to alternative practices. At the retail level, traditional pork (stalled) is still offered for consumers. The availability of options can be said for the restaurant level. This fact sheet looked at the incidence of consumer preferences when presented an option at the restaurant level.

Given no premium (or difference in price) between stall-free or stalled meal, more consumers preferred the stall-free option. Realistically, traditional and stall-free pork would not be presented at the same price due to the capital cost to transition and maintain stall-free operations. As the difference in price increases, there were still some consumers willing to purchase stall-free pork at a premium but as it increased, fewer were willing to purchase the stall-free item as it became less desirable due to price. This suggests price sensitivity in how consumers divide their preferences among different variables relating to purchasing decisions. Based on the data, consumers living in states with no ban on gestation stalls were more sensitive to price than those in states with the ban.