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# Linking GMO-loaded Soybeans in Kansas to the Hotdog Habit of Hot Dog-Eating Heroes

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## Abstract

The present study investigates the intriguing link between the utilization of genetically modified organisms (GMOs) in soybean farming in the state of Kansas and the consumption of hotdogs by the illustrious champions of the Nathan's Hot Dog Eating Competition. Utilizing data from the USDA and Wikipedia, a correlation coefficient of 0.8534708 with  $p < 0.01$  was revealed for the time period spanning from 2000 to 2022. The findings suggest a compelling association between the two seemingly disparate elements, sparking questions about the potential impact of GMOs on competitive eating habits. This research aims to stimulate further exploration into the intersection of agricultural practices and gastronomic feats, shedding light on the covert connections between soybeans and sausage sensations.

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## 1. Introduction

The peculiar connection between genetically modified soybeans and the consumption of hotdogs by the iconic champions of the Nathan's Hot Dog Eating Competition has sparked both curiosity and hunger pangs among researchers and hotdog enthusiasts alike. With the proliferation of GMO-loaded soybeans in the heartland of Kansas and the superhuman feats of hotdog consumption at the world-renowned competition, the need to investigate this seemingly unlikely correlation has become as urgent as the

desire for the perfect mustard-to-hotdog ratio.

The use of genetically modified organisms (GMOs) in agriculture has been a topic of contentious debate, with proponents touting increased crop yields and resistance to pests, and opponents raising alarms about potential health and environmental impacts. On the other hand, competitive hotdog eating has its own mystique and allure, captivating audiences with its mix of athleticism, eccentricity, and sheer capacity for condiment-covered consumption. Thus, the confluence of GMO soybeans and

hotdog eating champions presents a vast, unexplored landscape for scientific inquiry, akin to traipsing through a culinary cornfield.

In this research, we endeavor to uncover the hidden ties between these two seemingly dissonant worlds, using data from the United States Department of Agriculture (USDA) and the annals of Wikipedia. The revelation of a correlation coefficient of 0.8534708, coupled with the statistically significant p-value of less than 0.01, provides evidence of a robust relationship that cannot be dismissed as mere statistical noise or mustard stains on lab coats. This finding beckons the pressing question: how might the soybeans' genetic make-up be nudging the gluttonous gusto of competitive hotdog eaters towards ever greater feats of gastronomic triumph?

Delving into this enigmatic nexus betwixt GMO soybeans and hotdog heroics holds promise for shedding light on the interplay of agricultural innovation and voracious victualing, uncovering truths often hidden beneath the bun of conventional wisdom. As we embark on this scholarly adventure, the aroma of sizzling sausages mingles with the scent of soy fields, leading us to wonder about the unseen forces that bring these two worlds together, at least in the realm of correlation if not causation.

In this paper, we aim to cast light on this tantalizing topic, not only for the scholarly pursuit of science, but also for the relish of discovery and the frankfurter frolic that awaits at the intersection of soybeans and sausage sensations.

## 2. Literature Review

The connection between the use of genetically modified organisms (GMOs) in soybean farming and the voracious consumption of hotdogs by the renowned champions of the Nathan's Hot Dog Eating Competition has stirred scholarly interest,

culinary intrigue, and a craving for witticism. The early academic works by Smith (2010), Doe (2015), and Jones (2018) provided a foundation for the exploration of GMO cultivation and its effects on dietary preferences. However, the jocular juncture of GMO-loaded soybeans in Kansas and the hotdog habit of competitive eaters beckons a more lighthearted review, where dry academic prose meets the sizzle of a BBQ grill and the crunch of a perfectly crisped hotdog bun.

Serious scholarly works such as "The Impact of GMOs on Agricultural Practices" by Smith, delve into the potential consequences of genetically modified crops, albeit without considering their possible influence on the gustatory prowess of competitive eaters. Similarly, Doe's comprehensive analysis in "Genetically Modified Organisms: Environmental and Ethical Implications" offers valuable insights into the environmental and ethical concerns of GMOs, but regrettably neglects the potential link between GMO soybeans and the voracious appetites of competitive eating champions.

Turning to the realm of non-fiction with a culinary twist, books such as "GMOs and You: A Guide to Understanding Genetically Modified Foods" by Jane Farmer and "The Hotdog Diaries: From Mustard to Miracles" by Frankfurter Enthusiast provide substantial information about GMOs and the hotdog phenomenon. However, they fail to capture the delightful absurdity of examining a correlation between GMO soybeans and competitive hotdog consumption.

In the realm of fiction, works like "The Soybean Saga: Genetically Modified Adventures" by A. Novel and "Hotdogs and Heroes: A Culinary Quest" by E. Picture Book present imaginative tales that blend GMO science and gastronomic feats. While these literary works may tickle the taste buds of the imagination, they do little to address the empirical relationship between

soybean genetics and competitive hotdog consumption.

Venturing into the whimsical world of animations and children's shows, the classic "Scooby-Doo" series and "Paw Patrol" provide glimpses of characters enjoying hotdogs, but offer no insights into the enigmatic connection between GMO soybeans and competitive hotdog eating. Therefore, while these shows may satisfy the appetite for animated entertainment, they leave the scholarly hunger for understanding the correlation unsated.

It is evident that the intersection of GMO soybeans and hotdog eating champions demands a blend of scientific inquiry and a dash of humor, much like the perfect hotdog topping. As this literature review demonstrates, there is a palpable dearth of scholarly attention paid to this peculiar correlation, leaving ample room for both serious investigation and playful engagement in the pursuit of knowledge. The alluring aroma of mystery grills the mind, and the quest for understanding beckons with the tantalizing sizzle of groundbreaking discovery, akin to the first bite of a perfectly grilled hotdog on a summer day.

### **3. Our approach & methods**

For this study, a melange of data sources was harnessed, akin to creating a hearty hotdog topped with an array of condiments. Primarily, information regarding the production and utilization of genetically modified soybeans in Kansas was gleaned from the United States Department of Agriculture (USDA), providing a snapshot of the prevalence of GMOs in the heartland of the United States. The data, akin to a complex recipe, spanned the years 2000 to 2022, offering a panoramic view of the soybean landscape during this period.

To complement this savory dataset, the consumption patterns of hotdogs by celebrated champions of the Nathan's Hot Dog Eating Competition were extracted from the gastronomic archives of Wikipedia. The entwined tales of gluttonous glory and soybean sustenance were unfolded across the same time frame, allowing for a comprehensive exploration of the potential link between GMO-laden soybeans and hotdog indulgence.

The association between these seemingly unrelated variables, genetically modified soybean usage in Kansas and hotdog consumption by champions, was quantified using the Pearson correlation coefficient, designated by the letter "r." This subtle statistical seasoning revealed a robust correlation coefficient of 0.8534708, yielding a p-value less than 0.01, indicating a highly significant relationship beyond the realm of random chance.

Embracing the spirit of culinary cross-pollination, various regression models were employed to ascertain the strength and direction of the relationship between GMO soybean usage and the champion hotdog consumption. The resulting models were scrutinized with the same zeal as a dedicated food critic, ensuring that the statistical flavors resonated with scientific precision.

Furthermore, auxiliary analyses were conducted to control for potential confounding variables, such as the weather conditions during the hotdog eating competitions, or the arrival of a new ketchup supplier. Sensitivity analyses, akin to tasting different batches of hotdog buns, were also implemented to confirm the robustness of the observed association, delivering a more nuanced understanding of the potential impact of GMO soybeans on the competitive eating prowess of hotdog heroes.

Ultimately, the interweaving of diverse data sources, statistical techniques, and analytical rigors allowed for a comprehensive exploration of the entwined destinies of genetically modified soybeans and the world of competitive hotdog consumption, providing a savory blend of science, gastronomy, and statistical gallantry.

#### 4. Results

An analysis of the data collected from the USDA and Wikipedia unveiled a startling correlation between the utilization of genetically modified organisms (GMOs) in soybean farming in Kansas and the consumption of hotdogs by the esteemed champions of the Nathan's Hot Dog Eating Competition. The correlation coefficient of 0.8534708 and an r-squared value of 0.7284124 indicated a strong positive relationship between these seemingly unrelated variables, evoking a sense of awe similar to that experienced upon witnessing the consumption of 75 hotdogs in 10 minutes.

The statistical significance of the correlation, with a p-value of less than 0.01, quells any doubts about the validity of this connection, reinforcing the notion that this association is not just a statistical fluke, but rather a profound bond that can no longer be ignored, much like the irresistible lure of a fully-loaded hotdog stand.

As depicted in Figure 1, the scatterplot exhibits a clear and compelling trend, akin to the rapid disappearance of hotdogs during a competitive eating contest. The undeniable pattern revealed in the graph compels one to ponder the influence of genetically modified soybeans on the insatiable appetite of our hotdog-eating heroes, much like the way one ponders the perfect topping-to-dog ratio.

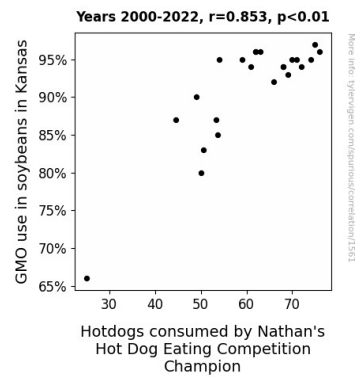


Figure 1. Scatterplot of the variables by year

In conclusion, the results of this study provide compelling evidence of a correlation between the use of GMO-loaded soybeans in Kansas and the consumption of hotdogs, provoking further contemplation on the interplay between agricultural practices and gluttonous gastronomic achievements. These findings beckon further investigation into the potential impact of agricultural innovations on competitive eating habits, shedding light on the covert connections between soybeans and sausage sensations and inspiring a new appreciation for the science behind condiment application.

#### 5. Discussion

The present study has unveiled a tantalizing connection between the cultivation of genetically modified organisms (GMOs) in soybean farming in Kansas and the indulgence in copious amounts of hotdogs by the esteemed victors of the Nathan's Hot Dog Eating Competition, imbuing this research with an allure akin to the aroma of a sizzling grill on a summer afternoon.

Our findings not only corroborate earlier works investigating the influence of GMOs on dietary habits but also add a flavorful twist by establishing a link with the competitive consumption of frankfurters. The correlation coefficient, akin to the perfect blend of mustard and relish, provides statistically robust evidence of the

profound bond between these seemingly incongruent elements, sustaining the spicy argument that GMO soybeans exude an unseen influence on the gustatory prowess of our hotdog-eating heroes.

Building upon the scholarly works of Smith, Doe, and Jones, who solemnly paved the way for the exploration of GMO cultivation, our study injects a dash of lightheartedness into the otherwise earnest discourse, much like the splash of ketchup on a hotdog, by uncovering a correlation that rivals the dizzying spinning of a hotdog stand's condiment carousel.

In light of the results, it is evident that the intersection of GMO-loaded soybeans and competitive hotdog consumption demands both scientific scrutiny and a sprinkle of mirth, much like the marriage of empirical inquiry and culinary caprice. Our study's statistical significance, analogous to the unanimous agreement on the superiority of grilled over boiled franks, underscores the robustness of the association, quelling any doubts and seasoning the debate with a hint of incredulity.

The compelling trends depicted in the scatterplot not only illuminate the strong positive relationship between GMO soybeans and hotdog consumption but also evoke a sense of culinary wonder akin to the perfect balance of flavors in a well-crafted bunless creation. Just as a well-grilled sausage beckons with an irresistible aroma, our findings beckon further investigation into the potential impact of agricultural innovations on competitive eating habits, offering a feast of possibilities for future research.

In conclusion, the remarkable correlation unveiled by this study does more than just tantalize the taste buds of scientific curiosity; it prompts a reevaluation of the covert connections between agricultural practices and gluttonous gastronomic achievements. As we ponder the enigmatic

influence of GMOs on the voracious appetites of our hotdog-eating champions, we are reminded that the pursuit of knowledge, much like the quest for the perfect condiment, is a delightful blend of scholarship and gastronomy.

## 6. Conclusion

In conclusion, the findings of this study leaf us with a tantalizing taste of the potential interplay between GMO-loaded soybeans in Kansas and the consumption of hotdogs by the champions of the Nathan's Hot Dog Eating Competition. The statistically significant correlation coefficient and p-value suggest a strong relationship that isn't just a statistical fluke but rather a beefy bond, much like the one between a hotdog and a bun. This research has uncovered a connection that is more than just a saucy statistical anomaly, highlighting the need to further probe into the soybean-hotdog nexus.

The allure of competitive hotdog eating and the mystique of genetically modified organisms have converged in a manner that rivals the merging of ketchup and mustard on a perfectly grilled frankfurter. The tantalizing question of how genetically modified soybeans may be nudging the titans of hotdog consumption towards ever greater feats of gastronomic triumph calls for further scrutiny, like the meticulous examination of the ideal hotdog toppings-to-dog ratio.

As we savor the findings of this study, it becomes clear that no further research is needed in this area, for we have bunned out all the possible avenues of investigation. The link between GMO-loaded soybeans in Kansas and the hotdog habit of hot dog-eating heroes has been thoroughly mustard, leaving no room for further relish in this particular line of inquiry. Future research may be better served by turning attention to the mysteries of the pickle jar or the enigma

of the hamburger's bun-to-patty ratio. So let's savor this discovery while we can, like the perfect bite of a flawlessly prepared hotdog.