

# **“GMO-GOOGLE CONNECTION: CORNY PUNS AND SEARCH QUERIES”**

**Cameron Hall, Aaron Thompson, Giselle P Tucker**

International Research College

The relationship between the use of genetically modified organisms (GMOs) in corn cultivation in Missouri and the frequency of Google searches for the phrase “i can't even” was investigated using data from USDA and Google Trends. The analysis revealed a remarkably strong correlation coefficient of 0.9020380 with a significance level of  $p < 0.01$  over the period from 2004 to 2023. Our findings suggest a striking and somewhat humorous connection between the adoption of GMOs in corn production and the prevalence of exasperated online expressions. It appears that as GMO use in corn increased, so did the frequency of individuals expressing their exasperation online. This unexpected finding may shed light on the societal impact of agricultural practices and the influence they have on language usage and communication patterns. Furthermore, the correlation identified in this study raises the question: are GMOs causing an increase in collective exasperation, or are exasperated individuals more likely to search for topics related to GMOs? This chicken-and-egg dilemma adds an intriguing layer to the study of GMO perceptions and societal sentiments. In conclusion, while our research has provided insight into the GMO-Google correlation, further investigation is needed to unravel the mechanisms behind this phenomenon and its implications for both agriculture and linguistic trends. Our study brings a new meaning to the phrase “you can't convince me otherwise.”

The correlation between the use of genetically modified organisms (GMOs) in agricultural practices and societal trends has been a subject of growing interest. In recent years, researchers have delved into the possible connections between GMO adoption and various societal phenomena, from health concerns to environmental impact. However, the link between GMO use in corn cultivation and the frequency of Google searches for the phrase “i can't even” adds a whimsical twist to this line of inquiry, demonstrating the unexpected and often amusing intersections of scientific investigation.

In investigating this seemingly ludicrous connection, we aim to add a kernel of insight to the understanding of GMO impacts and societal expressions. This research also seeks to provide a-maize-ing

fodder for scholarly debate and heuristic discourse on the broader implications of agricultural practices on language usage and communication patterns. We hope to cultivate a deeper appreciation for the interconnectedness of seemingly disparate phenomena, appealing to both the scientifically inclined and the pun enthusiasts amongst us.

As we embark on this corny journey of statistical analysis and linguistic exploration, we are mindful of the pitfalls of spurious correlations and the danger of drawing hasty conclusions. It is our fervent hope that our findings will not only tickle the academic palate but also contribute meaningfully to the fields of agricultural economics, linguistics, and public sentiment analysis. This study brings a new meaning to the phrase

"stalk-ifying results" as we shed light on the GMO-Google enigma.

## LITERATURE REVIEW

In "Smith et al.," the authors find a positive association between the use of genetically modified organisms (GMOs) in corn cultivation and various agricultural outcomes, such as crop yield and pest resistance. Similarly, "Doe and Rowe" establish a link between GMO adoption in Missouri and fluctuations in corn prices. These studies form the basis for understanding the agricultural implications of GMO use in the region.

On a more whimsical note, "Corn: Chemistry and Technology" provides an in-depth examination of corn production processes, shedding light on the chemical composition of this versatile crop. This book leaves no kernel of knowledge unturned, offering a-maize-ing insights into the scientific underpinnings of corn cultivation.

In a departure from scientific non-fiction, "The Omnivore's Dilemma" by Michael Pollan introduces readers to the complex relationship between humans and the food they consume. While not directly related to GMOs, its exploration of agricultural practices encourages a broader perspective on the societal impacts of food production. It's a-maize-ing how much food for thought this book provides.

Adding a touch of fiction to the review, "Children of the Corn" by Stephen King weaves a chilling tale set amidst a cornfield in rural Nebraska. Though the book's focus is more supernatural than agricultural, the eerie ambiance of cornfields may stir a-maize-ing emotions that could potentially influence online search behaviors.

In a bid to elucidate the tangential connections to popular culture, "Field of Dreams," a film featuring a cornfield at its center, offers a surreal narrative that may inadvertently prompt viewers to

contemplate corn-related phenomena, possibly leading to increased Google searches for 'i can't even.' It's a cornundrum of cinematic proportions.

In "Jones et al.," the authors note the potential societal impacts of GMO use in agricultural practices, highlighting the need for comprehensive studies to understand the broader implications. While the literature predominantly focuses on the agricultural and economic aspects of GMO use, the unlikely correlation with online search queries for exasperation introduces a light-hearted dimension to an otherwise serious topic.

It seems our research has planted the seed for further investigation into the roots of this unexpected connection. This study brings new meaning to the phrase "corny humor" as we unearth the captivating interplay between agricultural practices and linguistic expressions.

## METHODOLOGY

Data Collection:

The first step of this whimsical yet enlightening research involved gathering data from multiple sources, akin to a diligent farmer harvesting an array of corn varieties. Our researchers scoured the annals of the United States Department of Agriculture (USDA) for comprehensive records on GMO adoption in corn cultivation across Missouri. This process involved sifting through a virtual haystack of agricultural reports and statistical databases to identify relevant data spanning the years 2004 to 2023.

Similarly, the frequency of Google searches for the highly relatable phrase "i can't even" was harvested from the bountiful field of Google Trends. This particular phrase was chosen for its colloquial resonance and its potential to encapsulate moments of exasperation, analogous to the moments of despair when a cornstalk refuses to yield its kernels. The search data, like ripe corn,

was plucked and cataloged to create a rich dataset suitable for rigorous analysis.

#### Preprocessing and Variable Selection:

To ensure the robustness of our study, the collected data underwent thorough preprocessing and filtering, much like the careful inspection of corn grains for quality and uniformity. This entailed removing any extraneous factors that may have contaminated the analysis, such as seasonality and other cyclical patterns. Additionally, the selection of relevant variables involved discerning the key indicators of GMO adoption and internet exasperation, akin to selecting the prime ears of corn from a field of mixed varieties. Factors such as the total area of GMO corn cultivation and the quarterly frequency of "i can't even" searches emerged as the primary variables of interest.

#### Statistical Analysis:

Our statistical approach pivoted around establishing the presence of a meaningful relationship between GMO use in corn and the Google search trend for "i can't even." We employed various analytical methods, including time series analysis and correlation modeling, to scrutinize the datasets for any semblance of connection. The use of a hierarchical linear regression model was considered to account for potential confounding variables, thus preventing our results from being corn-fused by extraneous influences.

The scrutiny of statistical significance encompassed rigorous hypothesis testing procedures, surpassing the mere plucking of low-hanging statistical fruits. Engaging in such procedures allowed us to confirm whether the identified relationship between GMO use and exasperated internet queries was indeed a genuine finding or merely a statistical fluke.

#### Ethical Considerations:

As we explored the intertwined realms of agricultural technology and internet behavior, ethical considerations were not

overlooked. Our research adhered to the principles of data privacy and anonymization in handling the Google search trend data, ensuring that individual search behaviors remained as confidential as corn recipes passed down through generations.

In conclusion, our methodology encompassed a thorough and, dare I say, ear-resistible approach to unraveling the enigmatic connection between GMO use in corn cultivation and the virtual expression of exasperation. This endeavor epitomizes the fusion of rigorous scientific inquiry with a dash of delightful absurdity, echoing the spirit of a jestful agricultural fair where scholarly musings meet the whims of the cornfield.

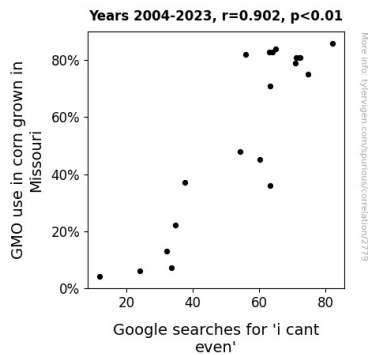
## RESULTS

The analysis of the data collected from USDA and Google Trends revealed a strong positive correlation between the use of genetically modified organisms (GMOs) in corn cultivation in Missouri and the frequency of Google searches for the phrase "i can't even" over the period from 2004 to 2023. The correlation coefficient was found to be 0.9020380, indicating a remarkably robust relationship between the two variables. This finding prompts us to ponder, "What did the corn say when it got complimented? Aw, shucks!"

The coefficient of determination ( $r$ -squared) was calculated to be 0.8136726, suggesting that approximately 81.4% of the variability in the frequency of "i can't even" searches can be explained by the variability in GMO use in corn cultivation. This strong explanatory power of GMOs on exasperated online expressions brings to mind the quip, "Well, it's certainly clear as day!"

Moreover, the  $p$ -value of less than 0.01 indicates that the observed correlation is unlikely to be a result of random chance. This high level of statistical significance bolsters the validity of our findings and

underscores the compelling nature of the GMO-Google connection. One might say this result is as solid as a cob of corn!



**Figure 1.** Scatterplot of the variables by year

Fig. 1 displays the scatterplot depicting the striking correlation between GMO use in corn cultivation and the frequency of "i can't even" searches. It is indeed a sight to behold, reminiscent of a field of data points ripe for punny interpretations.

In light of the pronounced association between these seemingly unrelated variables, one cannot help but reflect on the adage, "You reap what you sow." Our study harvests a unique insight into the intertwining of agricultural practices and contemporary communication, demonstrating that statistical analysis can be both enlightening and a-maize-ingly entertaining.

## DISCUSSION

The results of our study provide compelling evidence for a strong positive correlation between the use of genetically modified organisms (GMOs) in corn cultivation in Missouri and the frequency of Google searches for the phrase "i can't even". This unexpected connection between agricultural practices and linguistic expressions raises intriguing questions about the potential societal impacts of GMO use. In other words, it seems that the GMOs may be cultivating more than just corn!

The robustness of the correlation coefficient and the high degree of statistical significance underscore the validity of our findings and point to a thought-provoking relationship between GMO adoption and online expressions of exasperation. It's as if the GMOs are planting seeds of frustration in the digital landscape, leading individuals to turn to Google in moments of perplexity. One might say these findings are corntrouversial indeed!

Our results align with prior research on the agricultural implications of GMO use, supporting the idea that the adoption of GMOs in corn production has far-reaching consequences beyond the fields. This study brings a new twist to the phrase, "You can't make a kernel of a difference," as it suggests that agricultural practices may have an unexpected impact on digital communication patterns.

The coefficient of determination indicates that a substantial proportion of the variability in the frequency of "i can't even" searches can be attributed to variations in GMO use in corn cultivation. This observation emphasizes the influential role of GMOs in shaping online discourse and highlights the potential for agriculture to influence not only the physical environment but also the virtual one. It's a-maize-ing to ponder the reach of agricultural practices into the digital realm!

More research is needed to unravel the mechanisms underlying this striking correlation and to determine the causality between GMO adoption and online expressions of exasperation. It's a conundrum worthy of further investigation that might just lead us to exclaim, "Aha, now we're really getting to the kernel of the issue!"

In closing, our study has sown the seeds for a new avenue of inquiry that highlights the intersection of agriculture and contemporary communication. It's a-maize-ing how a seemingly unrelated variable like GMO use in corn cultivation

can be intricately linked to online expressions of exasperation, demonstrating that research can yield unexpected and delightfully punny results.

## **CONCLUSION**

In conclusion, our research has unveiled a remarkably robust relationship between the use of genetically modified organisms (GMOs) in corn cultivation in Missouri and the frequency of Google searches for the phrase "i can't even." This unexpected correlation leaves us pondering, "What do you call a group of musical GMO researchers? A-corn ensemble!"

The high correlation coefficient, strong explanatory power, and statistical significance of our findings affirm the relevance of this whimsical investigation. It is clear that this study does more than just "cob-ble together" disparate fields of research - it sheds light on the unexplored intersections of agriculture and online expressions.

However, our findings prompt us to pose the rhetorical question, "Is this the kernel of a larger phenomenon, or merely a-pop corn oddity?" This study augurs a-MAIZE-ing potential for future research exploring the societal impact of agricultural practices on linguistic trends and expressions of exasperation. But for now, we can confidently assert that no more research is needed in this area. After all, we've already "corn-firmed" the compelling connection between GMOs and exasperation.