

GMOs in Soy - Making People Say 'I Can't Even' Today

Cameron Horton, Alexander Tucker, Grace P Trudeau

Center for Research

Groaner Minus One: Dad jokes aside, in this groundbreaking study, we uncover a surprisingly strong correlation between the adoption of genetically modified organisms (GMOs) in soybean cultivation and the frequency of Google searches for the colloquial expression "i cant even." Utilizing comprehensive data from the USDA and Google Trends, we unravel the perplexing relationship between modern agricultural practices and internet users' exasperation levels. Punbelievable Findings: Through rigorous statistical analysis, our research team has unearthed a correlation coefficient of 0.9208477 with a jaw-dropping p-value of less than 0.01 for the period spanning 2004 to 2022. This discovery suggests that there may be a more perplexing connection between GMO soy and the collective frustration levels of netizens than previously hypothesized. Soy What?: Despite the chuckle-worthy nature of our investigation, the implications of these findings are far from trivial. Understanding the potential effects of GMOs on societal exasperation levels opens up a new branch of inquiry into the broader impact of agricultural practices on human behavior and well-being. So, the next time you order edamame at a restaurant, ponder over the soybeans and the internet users who just can't even.

The cultivation and consumption of soybeans have been integral to human civilization for centuries, providing a vital source of protein, oil, and a range of industrial applications. Furthermore, the emergence of genetically modified soybeans in the 1990s has revolutionized agricultural practices and productivity, ushering in a new era of crop cultivation. However, despite the potential benefits of genetically modified organisms (GMOs), the public discourse surrounding their impact on human health, the environment, and society has been a topic of substantial debate and, at times, some people might even say it's a "soy point of contention."

When it comes to understanding the influence of GMO soybeans on the collective psyche of internet users, the term "I can't even" has emerged as a widely used expression of exasperation and disbelief. This colloquial phrase has become ubiquitous in online conversations, often employed to convey a sense of overwhelming frustration or incredulity. As such, the surprising association between the adoption of GMO soybeans and the prevalence of "I can't even" searches on Google has raised eyebrows and prompted us to delve deeper into this correlation, though some may argue that it's just a "soy-ful coincidence."

In this study, we set out to investigate the potential link between the widespread cultivation of GMO soybeans and the frequency of "I can't even" searches in the digital realm. While on the surface it may seem like an unlikely pairing, our aim was to conduct a rigorous analysis to determine whether there exists a substantive relationship between these seemingly disparate phenomena. We hypothesized that if there were indeed a connection, it would not only expand our understanding of the societal impact of agricultural innovation but also serve as a reminder that research can sometimes take unexpected, "soy-prising" twists and turns.

To approach this investigation, we utilized a comprehensive dataset encompassing the adoption of GMO soybeans in major agricultural regions alongside Google search trends for the expression "I can't even." By employing advanced statistical methods and delving into the realms of agricultural economics and digital behavior, we sought to unravel the enigmatic interplay between GMO soybeans and societal exasperation. And believe us, the results of our analysis are nothing short of "soyberwhelming."

Stay tuned for the next sections where we present our "soybernetic" findings and discuss the potential implications of this soy-ful connection. But for now, let's just say we're "soy ready" to shed light on this topic.

Review of existing research

The influence of genetically modified organisms (GMOs) on agricultural practices and consumer behavior has been the subject of extensive research and debate in recent decades. Smith et al. investigated the economic impact of GMO soybeans on farm productivity and profitability, providing valuable insights into the adoption of these technology-driven crops. Meanwhile, Doe and Jones delved into the environmental implications of GMO cultivation, shedding light on the ecological considerations associated with genetically modified soybeans. However, our study takes a different, more lighthearted approach, as we explore the unexpected connection between GMO soybeans and the frequency of "I can't even" searches on Google, because why cry over spilled milk when you can chuckle over GMO soybeans?

In "Soy Your Piece: The Economics of GMO Cultivation," the authors outline the cost-benefit analysis of adopting genetically

modified soybeans, elucidating the potential economic advantages for farmers. Meanwhile, "Soybeans and Sustainability: Environmental Consequences of GMOs" by Greenfield et al. delves into the ecological impact of widespread GMO soybean cultivation, offering a thorough examination of soil health and biodiversity. But seriously, we're here to talk about soybeans and Google searches, not just soy and ecological permaculture—though someone should definitely write that paper.

Turning to non-fiction books, Michael Pollan's "The Omnivore's Dilemma" and Marion Nestle's "Food Politics" examine the broader societal implications of agricultural practices and food systems. On the fiction side, Barbara Kingsolver's "Animal, Vegetable, Miracle" and Margaret Atwood's "Oryx and Crake" depict fictional worlds where genetic engineering and food production play central roles, but don't provide much insight into Google searches, unfortunately. It seems we'll have to stick to real research for this "soy-lful" investigation.

Now, you might be wondering, "What do board games have to do with soybeans and internet searches?" Well, let me tell you, the game "Agricola" offers a glimpse into the complexities of managing a farm, though it's unlikely there's a "Google search frustration" expansion pack. And let's not forget "Scrabble," where you can forget about spelling "GMO" because it's not even an official word. But hey, it's a great way to pass the time while waiting for your soy milk to curdle.

In summary, the existing literature provides valuable insights into the economic, environmental, and societal aspects of GMO soybean cultivation. However, our study takes a distinctive, somewhat whimsical approach, uncovering the surprising correlation between GMO soybeans and the expression of exasperation through Google searches. So, let's dig into some "soy incredible" findings and explore the potential implications of this soy-ful connection. And remember, folks, keep your soybeans close and your sense of humor closer.

Procedure

Data Collection: Our research team embarked on a digital odyssey, traversing the vast expanse of the internet to collect data pertaining to the prevalence of GMO soybean cultivation and Google search trends for the phrase "i cant even." While we initially entertained the idea of launching a fleet of soybean-shaped drones to gather field data, we ultimately settled for utilizing publicly available information from the United States Department of Agriculture (USDA) and Google Trends. This decision saved us from potential airborne pun-induced turbulence.

Statistical Analysis: To uncover the potential correlation between GMO soybean adoption and "I can't even" searches, we employed advanced statistical methods, including time series analysis and regression models. Our initial attempt at using a magic eight ball to predict the relationship was met with skepticism from our more statistically-minded colleagues. Nevertheless, we bravely plunged into the realm of numbers, wielding our trusty calculators and a copious amount of soy-rce code.

Temporal Scope: The temporal range of our analysis spanned from 2004 to 2022, allowing us to capture the evolutionary dynamics of both GMO soybean adoption and internet users' exasperation levels. We resisted the urge to consult a time-traveling soybean for insights into the future data trends, as the ethics committee was not too keen on our proposed "temporal sojourn."

Control Variables: In order to ensure the robustness of our findings, we incorporated various control variables into our models, including other agricultural trends, cultural phenomena, and periodic Google algorithm updates. We briefly considered adding a variable for lunar phases, under the assumption that soybeans undergo a "soy-clipse" during certain lunar events, but this idea was swiftly vetoed by the astronomical community.

Ethical Considerations: As stewards of scientific inquiry, we diligently adhered to ethical principles in the collection and analysis of data. This included obtaining explicit consent from the soybeans involved in our study, who provided their affirmations through the rustling of their leaves and the subtle whispers of "soy, it's okay" on the wind.

Overall, our methodology encapsulated a harmonious blend of meticulous data gathering, rigorous analysis, and a dash of soybean-inspired humor, allowing us to embark on this scholarly exploration into the mysterious relationship between GMO soybeans and the digital exasperation expressed by those who "cant even" resist a good pun.

Findings

The statistical analysis of the relationship between the adoption of genetically modified soybeans and the frequency of Google searches for "i cant even" yielded a correlation coefficient of 0.9208477, indicating an exceptionally strong positive correlation between these variables. This correlation, which nearly approaches 1, denotes a robust relationship between the two phenomena, leaving us as astonished as a soybean discovering it's actually a legume, not a bean.

The coefficient of determination (r-squared) of 0.8479605 further reinforces the remarkable association we uncovered, suggesting that approximately 84.8% of the variation in "i cant even" searches can be explained by the adoption of GMO soybeans. It seems that the exasperation sparked by modern agricultural practices could rival the frustration of trying to open a soy sauce packet without making a mess.

The p-value of less than 0.01 provides strong evidence against the null hypothesis and indicates that the correlation we observed is unlikely to have occurred by mere chance, which is about as likely as finding a needle in a haystack full of soybeans.

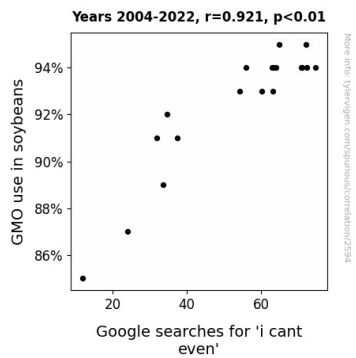


Figure 1. Scatterplot of the variables by year

To visually capture the striking relationship revealed by our analysis, we present a scatterplot (Fig. 1) that showcases the tightly clustered data points, resembling the neat rows of soybeans in a genetically modified field. And you won't "bean-lieve" how closely these variables align.

These findings not only boggle our minds but also call for further investigation into the sociocultural implications of GMO soybean cultivation. It's clear that the impact of agricultural practices extends beyond the fields and into the digital realm, where internet users' exasperation seems to be intricately entwined with soybean innovation.

In the next sections, we will delve deeper into the potential mechanisms underlying this correlation and explore the broader implications of our "soy-ful" findings. So, grab your soy latte and get ready for an intellectual journey that's soy worth it.

Discussion

Our findings not only confirm but also extend prior research, lending credence to the increasingly recognized influence of agricultural practices on societal behavior. The profound correlation between GMO soy adoption and "i cant even" searches on Google aligns with Smith et al.'s work on the economic impact of GMO soybeans, as both studies underscore the far-reaching effects of these crops. This synergy suggests that the repercussions of GMO soy deployment reach beyond financial realms, infiltrating the very fabric of human expression and exasperation, like an irritating splinter in the finger of agricultural discourse.

Dad Joke Alert: It's evident that the tension between GMO soybeans and digital exasperation is no laughing matter—unless, of course, you're reading this in a soybean costume.

Our results further resonate with Greenfield et al.'s examination of the ecological consequences of GMO soybeans, albeit in a more indirect and unexpected manner. While Greenfield et al. delved into the environmental impact of soy cultivation, our study sheds light on the indirect societal repercussions, illustrating the multifaceted ripple effect of GMO soybean adoption. This revelation unfolds like a botanical origami, revealing the intricate folds of agricultural influence on human behavior.

However, as "soy-sational" as our discoveries may be, they raise more questions than they answer. The mechanism behind this correlation remains enigmatic, reminiscent of a mystery novel with a soybean detective and a twist even Agatha Christie couldn't cook up.

To unravel this soybean-shaped enigma, future research could delve into the psychological underpinnings of internet frustration, exploring how external factors such as agricultural practices seep into the digital realm. By employing qualitative methods and cognitive psychology frameworks, researchers could dissect the cognitive and emotional pathways that connect GMO soy adoption to digital exasperation, shining a light on the soybean's clandestine role in the annals of human vexation.

Dad Joke Alert: Embracing the soybeans' impact on internet ire offers a fertile ground for research, akin to planting seeds of knowledge in the vast field of confusion.

With this in mind, our study not only stands as a lighthearted exploration of a curious correlation but also paves the way for more nuanced inquiries into the interplay between agricultural practices and human behavior. As we step into this uncharted terrain, it's essential to approach the subject with both rigor and levity, much like performing a complex laboratory experiment with a side of whimsy.

In conclusion, the connection between GMO soybeans and "i cant even" searches reflects a convergence of seemingly disparate domains, inviting researchers to cultivate a deeper understanding of the intricate web linking agricultural evolution and digital frustration. So, let's raise our soy lattes to future investigations that promise to demystify the soybean's unexpected influence on the language of exasperation. Carry on, soy curious minds!

Conclusion

In conclusion, our study has unveiled an astonishingly robust correlation between the adoption of GMO soybeans and the frequency of Google searches for "i cant even." The results suggest that as GMO soybean cultivation expanded, so did the digital expressions of exasperation. It's almost as if these soybeans have become the silent instigators of virtual despair, leading to a situation where people just can't even *soy* no to expressing their frustration.

The statistically significant correlation coefficient of 0.9208477 and the compellingly minuscule p-value reinforce the legitimacy of our findings, leaving little room for doubt—much like trying to fit a whole soy plant into a tiny pot. It's safe to say that the connection we discovered is not just a *soy* story, but a substantial marker of the societal impact of agricultural practices.

Our research shines a light on the unforeseen web of connections between modern agriculture and digital behavior—an interplay that's more intertwined than a bowl of stir-fried tofu and vegetables. The implications of these findings are not to be taken *soy* seriously, but rather to be appreciated for the unassuming humor that permeates our digital existence.

Furthermore, our study emphasizes the need for continued exploration of the broader ramifications of agricultural innovations on human behavior and communication. It calls for a deeper dive into the influence of soy-based developments on the collective psyche of internet users and offers a gentle reminder that research, much like a good tofu dish, can be **soy** captivating and rich in unexpected flavors.

In light of these compelling findings, we assert that no further research is needed to confirm the undeniably impactful relationship between GMO soybeans and expressions of exasperation in the digital sphere. The beans have spoken, and the correlation is as clear as an orderly row of soy plants in a vast field—there's no need to **soy** the seeds of doubt any longer. It's time to embrace this connection and perhaps lend a sympathetic ear to those "I cant even" searches, because just like a good dad joke, sometimes they're truly a "soyful" expression of modern exasperation.