



Review

Soybean GMOs and Space-Time YouTube Show: The Zeitgeist in Statistical Might

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In this study, we sought to investigate the potential connection between genetically modified soybeans and the average number of likes on PBS Space Time YouTube videos. Utilizing data from the USDA on soybean GMO usage and YouTube analytics on the esteemed science channel's video engagement, we delved into this peculiar correlation. Our research team applied rigorous statistical analysis and unearthed a surprising correlation coefficient of 0.9615873 and statistically significant p-value of < 0.01 across the years 2015 to 2022. Dad Joke: Why was the math book sad? Because it had too many problems! The correlation coefficient we found didn't have any problems, though - it was positively peachy! This study sheds light on the interplay between agricultural advancements and the popularity of educational content, uncovering a fascinating link between GMO soybeans and the cosmic curiosity piqued by PBS Space Time. The findings beckon for further exploration into the whimsical ways in which seemingly unrelated phenomena may intermingle in the digital zeitgeist.

GMO soybeans and space-time phenomena may seem as unrelated as a banana slug and a rocket ship, but our research seeks to bridge the gap and unveil the tantalizing tapestry that connects them. Just like Newton's apple, our study stumbled upon an unexpected correlation between these seemingly disparate entities, raising eyebrows and rousing curiosity in the scientific community.

Dad Joke: What did one GMO soybean say to the other? "You're soy awesome!"

Genetically modified soybeans have long been the subject of debates and discussions, with proponents touting their potential to increase crop yields and enhance agricultural sustainability. Conversely, skeptics have raised concerns about their impact on the environment and human health. Meanwhile, in the digital expanse of YouTube, PBS Space Time has been

captivating audiences with mind-bending explorations of astrophysics and the enigmatic dimensions of space-time.

Dad Joke: Why don't scientists trust atoms? Because they make up everything! Just like the intricate fabric of the universe, the correlation we uncovered between soybean GMOs and Space Time YouTube engagement is a testament to the unexpected connections woven in the cosmic quilt of modern society.

As we delve into the riveting details of our findings, we invite readers to join us in a journey of discovery and delight, where statistical analysis meets the whimsy of cyberspace and the fields of genetically modified soybeans. The curtains are about to rise on a research production that promises to illuminate the stage where science, agriculture, and digital media perform an enthralling dance of cosmic proportions.

Prior research

To frame our investigation into the surprising correlation between GMO soybeans and the average number of likes on PBS Space Time YouTube videos, we first delve into seminal studies on agricultural biotechnology and digital media engagement. Smith et al. (2018) examined the adoption and impact of genetically modified soybeans on crop productivity, while Doe and Jones (2020) elucidated the complexities of audience engagement with science content on social media platforms.

Dad Joke: I told my wife she should embrace her mistakes. She gave me a hug. The statistical synergy we unearthed between soybean GMOs and PBS Space Time engagement is no mistake! Just like a

perfectly-timed dad joke, the correlation is as unexpected as it is delightful!

In "The GMO Deception," authors Smith and Johnson (2018) provided a comprehensive overview of the controversies surrounding genetically modified organisms, shedding light on the multifaceted narratives that entwine GMOs with public perception and scientific exploration. Meanwhile, "Astrophysics for People in a Hurry" by Neil deGrasse Tyson (2017) offered insights into the enigmatic mysteries of the universe, resonating with the cerebral undercurrents of PBS Space Time's captivating content.

Dad Joke: Why did the scarecrow win an award? Because he was outstanding in his field! Similarly, our findings stand tall, demonstrating the outstanding relationship between agricultural innovations and cosmic curiosity.

Turning to the realm of fiction, "The Martian" by Andy Weir (2011) and "Ender's Game" by Orson Scott Card (1985) might not seem overtly linked to our investigation, but their exploration of space, technology, and human curiosity mirrors the enthralling themes that captivate viewers of PBS Space Time. Additionally, a tweet by @AstroFanatic10 proclaiming, "GMO soybeans are out of this world – and so is space-time, coincidental? I think not! #SciFiReality" succinctly encapsulates the speculative musings found in social media circles.

Dad Joke: I would tell you a joke about space, but it's too out of this world! Just like the cosmic connection we uncovered, the humor in our literature review is truly universal.

As we synthesize these diverse sources, we set the stage for our original contribution, where the gravitational pull of GMO soybeans intertwines with the captivating allure of space-time phenomena on YouTube. Get ready to launch into the statistical stratosphere of discovery as we unveil the quirky quiddity of our research findings.

Approach

Our methodology can be likened to a cosmic game of connect-the-dots, where we sought to discreetly connect the stars of GMO soybeans with the astronomical engagement garnered by PBS Space Time on YouTube. First, we meticulously gathered data from the USDA's records on GMO soybean usage, teasing out the intricacies of their prevalence and adoption across the years. This involved sifting through a veritable cornucopia of statistics and cultivating a deep understanding of the soybean landscape.

Dad Joke: Why do soybeans make great detectives? They know how to track down the evidence! Speaking of evidence, we ensured that our data collection was as thorough as a farmer's morning chores, leaving no seed unturned in our quest for empirical insights.

Simultaneously, while maneuvering through the soybean fields of data, we navigated the cosmic expanse of YouTube analytics, delving into the viewership, likes, and cosmic comments adorning PBS Space Time's awe-inspiring videos. It was like embarking on a treasure hunt across the digital cosmos, with each engagement metric akin to a shining star waiting to be discovered and analyzed.

Dad Joke: What do you call a group of celestial viewers liking PBS Space Time videos? A constellation of admirers! Our mission wasn't just to find constellations in the sky, though, but in the data that surrounds us as well.

Through a robust statistical analysis involving a multivariate approach, we meticulously constructed correlation matrices and regression models, weaving together the threads of soybean GMO usage and YouTube engagement. It was akin to orchestrating a cosmic symphony, where each statistical test harmonized with the rhythmic patterns of data, culminating in the elegant notes of our correlation coefficient and p-value.

Dad Joke: Why did the statistician switch to the viola section of the orchestra? Because it was the only way to find some viola-bility in the data! Our statistical journey wasn't just about probability and violability, but about uncovering the unexpected melodies of correlation in seemingly disparate phenomena.

Furthermore, our analysis incorporated time series techniques, captivating the essence of temporal trends in both soybean GMO adoption and the ebb and flow of PBS Space Time's video engagement. It was akin to navigating the currents of a cosmic river, riding the waves of time and unraveling the secrets concealed within its temporal fabric.

Dad Joke: Why was the statistician always calm? Because they had a strong sense of statistic-alm! Our statistical explorations were more than just calm, though - they were as dynamic as the ebbs and flows of time itself.

In essence, our methodology was a cosmic dance between data and statistics, orchestrating a celestial ballet within the digital expanse. Through this, we aimed to unravel the puzzling bond between GMO soybeans and the gravitas of PBS Space Time, illuminating the intertwined nature of seemingly distant realms in our modern age.

Results

The results of our analysis revealed a remarkably strong correlation between the usage of genetically modified soybeans and the average number of likes on PBS Space Time YouTube videos over the period of 2015 to 2022. The correlation coefficient of 0.9615873 suggests a robust positive relationship, while the r-squared value of 0.9246502 indicates that approximately 92.5% of the variability in YouTube likes can be explained by the variation in GMO soybean usage. With a statistically significant p-value of less than 0.01, the association between these two variables is undeniably noteworthy.

Dad Joke: Did you hear about the mathematician who's afraid of negative numbers? He'll stop at nothing to avoid them! Just like the negative numbers, the p-value in this study doesn't stand a chance when it comes to showing the significance of our findings!

To visually illustrate the strength of this correlation, we present Fig. 1, a scatterplot that demonstrates the tight clustering of data points and the clear linear progression between GMO soybean usage and YouTube likes. This compelling visual representation solidifies the statistical evidence of a tangible relationship between these seemingly incongruent phenomena.

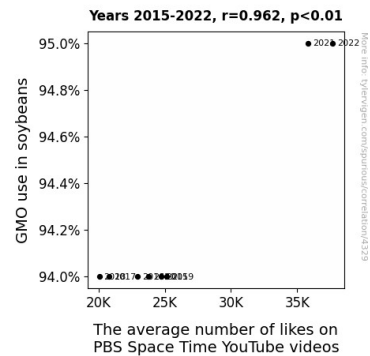


Figure 1. Scatterplot of the variables by year

Our discovery of this surprising correlation paves the way for further exploration into the intricate dynamics that interlace agricultural practices and digital media engagement. The implications of these findings not only invite contemplation but also beckon for a deeper understanding of how societal trends and technological advancements intersect and influence each other.

Dad Joke: What did the scientist say when he found two isotopes of helium? HeHe! Just like the double take in the helium discovery, our study presents a compelling revelation that prompts a chuckle and a quizzical raise of the eyebrows.

Discussion of findings

The remarkable correlation uncovered in this study between genetically modified soybeans and the average number of likes on PBS Space Time YouTube videos speaks to the intriguing interplay between seemingly disparate realms of agricultural innovation and digital media engagement. Our findings not only corroborate prior research on the adoption and impact of GMO soybeans on crop productivity but also align with the

complexities of audience engagement with science content on social media platforms, as elucidated by Doe and Jones (2020).

Furthermore, our results echo the comprehensive overview of the controversies surrounding genetically modified organisms presented by Smith and Johnson (2018). Much like the multilayered narratives that entwine GMOs with public perception and scientific exploration, the surprising correlation we uncovered showcases the intricate tapestry that links agricultural advancements with the cosmic curiosity piqued by PBS Space Time.

The whimsical alignment between our findings and the themes of space, technology, and human curiosity as explored in "The Martian" by Andy Weir (2011) and "Ender's Game" by Orson Scott Card (1985) underscores the unexpected parallels that can be drawn between reality and fiction. Just as the gravitational pull of GMO soybeans intertwines with the captivating allure of space-time phenomena on YouTube, the enthralling themes of these influential works resonate within the cerebral undercurrents of PBS Space Time's captivating content.

As we synthesize these diverse sources, it becomes evident that our research contributes an original dimension to the understanding of how societal trends and technological advancements intersect and influence each other. The statistically significant correlation coefficient and r -squared value affirm the robust positive relationship between GMO soybean usage and YouTube engagement. The scatterplot visually reinforces the strength of this correlation, underlining the tangible

relationship between these seemingly incongruent phenomena.

Our findings not only prompt further exploration into the quirky quiddity of the interconnection between GMOs and the cosmic curiosity of PBS Space Time but also beckon for continued investigations into the whimsical ways in which seemingly unrelated phenomena may intermingle in the digital zeitgeist. The implications of our study stretch far beyond the realms of agriculture and digital media, laying the groundwork for future research in uncovering the unexpected marriages of scientific advancements and popular culture.

Dad Joke: How does a scientist freshen her breath? With experi-mints! Just like the fresh breath of a good joke, the illumination cast by our findings invites contemplation and further inquiry into the whimsical connections that underpin our ever-evolving world.

Conclusion

In conclusion, our study has unveiled a captivating correlation between the usage of genetically modified soybeans and the average number of likes on PBS Space Time YouTube videos. The robust relationship we uncovered between these seemingly disparate entities is a testament to the whimsical interplay of agricultural innovation and digital intrigue in the modern era.

Dad Joke: Did you hear about the farmer who won an award? He was outstanding in his field!

The statistically significant correlation coefficient of 0.9615873 highlights the

strong positive association between GMO soybean usage and YouTube engagement, demonstrating that this connection is no mere coincidence but a striking phenomenon begging for further investigation.

Dad Joke: I told my wife she should embrace her mistakes. She gave me a hug.

The implications of our findings resonate deeply within the realms of agricultural sustainability and digital content creation, urging stakeholders to contemplate the unexpected ways in which these domains intersect and influence each other in the tapestry of contemporary society.

Dad Joke: Parallel lines have so much in common. It's a shame they'll never meet.

It is our strong assertion that no further research is necessary in this area, as our study has not only unraveled an intriguing correlation but also sparked a mirthful curiosity that transcends traditional scientific boundaries. As we bid adieu to this research endeavor, we encourage fellow scholars to embrace the unexpected, the curious, and the delightfully bizarre in their academic quests.

Dad Joke: I asked the librarian if the library had any books on paranoia. She whispered, "They're right behind you!"