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# Stalk-ing the Link: Corncerns and Connections between GMO Corn in Indiana and Australian Births

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## KEYWORDS

GMO corn, Indiana, Australian births, GMO technology, USDA, correlation coefficient, birth trends, agricultural practices, demographic phenomena

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## Abstract

The prevalent cultivation of genetically modified organisms (GMOs) in corn has been a topic of extensive debate and speculation. As one of the primary adopters of GMO technology, the state of Indiana has witnessed substantial changes in its corn industry. Amidst the ongoing discourse surrounding GMOs, our study sought to ascertain a peculiar linkage between the usage of GMOs in corn grown in Indiana and the total number of live births in Australia. Leveraging data from the United States Department of Agriculture (USDA) and the vast font of knowledge that is Wikipedia, we meticulously examined the statistical association between these seemingly disparate variables. Remarkably, our analysis revealed a strikingly robust correlation coefficient of 0.9773940, accompanied by a stupefyingly low p-value of less than 0.01 for the years 2000 to 2022. This correlation suggests a curious, albeit enigmatic, relationship between GMO corn in the heartland of America and the birthing trends down under. Our findings unveil a compelling confluence of agricultural practices and demographic phenomena that merit further inspection and contemplation. While the causal mechanism for this linkage remains inscrutable, our research underscores the imperative to scrutinize the unexpected connections lurking beneath the surface of seemingly unrelated domains.

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## 1. Introduction

The prevalent cultivation of genetically modified organisms (GMOs) in corn has sparked heated debates and cultivated

fertile ground for conspiracy theories and urban myths. The state of Indiana, nestled in the heartland of America, has embraced GMO technology, shaping the landscape of its corn industry. Despite the whispers of

skeptics and the clucking of naysayers, our study set out to approach this subject with the seriousness it deserves and ascertain a peculiar linkage between the usage of GMOs in corn grown in Indiana and the total number of live births in a land down under, Australia.

Leveraging data from the United States Department of Agriculture (USDA) and, dare I say, the vast font of knowledge that is Wikipedia, our team meticulously examined the statistical association between these seemingly disparate variables. The corn stalks of Indiana and the womb's yield in Australia may appear to have as much in common as a kangaroo and a corn husk, but our analysis unearthed a correlation coefficient of 0.9773940, a figure that would make even the most seasoned statistician do a double take. Accompanied by a p-value of less than 0.01 for the years 2000 to 2022, our findings not only raised eyebrows but also sparked a flame of curiosity.

This correlation, reminiscent of the stalks of genetically modified corn reaching for the sun, suggests a curious, albeit enigmatic, relationship. The robust statistical association between GMO corn in the heartland of America and the birthing trends down under took us by surprise, much like finding a corn cob in a kangaroo's pouch. The implications of this unexpected linkage resonate through the fields of agricultural practices and the intricate web of demographic phenomena. While the causal mechanism for this connection remains as mysterious as crop circles in a cornfield, our research calls attention to the imperative of scrutinizing the entwined roots of seemingly unrelated domains.

As we delve into the intricate threads weaving together the growth of GMO corn in Indiana and the fertility trends in Australia, we invite the reader to join us in exploring this captivating intersection of agriculture and demographics. This journey may lead

to insights as surprising as finding a golden kernel in a sea of cornstalks.

## 2. Literature Review

The authors find that the connection between the usage of genetically modified organisms (GMOs) in corn grown in Indiana and the total number of live births in Australia has been a subject of rather limited scholarly investigation, evidently due to its unexpected and seemingly improbable nature.

Smith and Doe (2015) conducted a comprehensive review of the impacts of GMOs on agricultural systems, focusing primarily on crop yields and pesticide usage. Their work, while seminal in underscoring the agronomic implications of GMO adoption, regrettably did not delve into the potential transcontinental repercussions of Indiana's GMO corn on the fertility trends in a faraway land.

Jones (2018) examined the political economy of GMOs, shedding light on the lobbying efforts and regulatory dynamics surrounding genetically modified crops. Although Jones' analysis is invaluable for elucidating the power struggles and economic interests at play, it regrettably overlooks the serendipitous link between the cornfields of Indiana and the maternity wards of Australia.

In a similar vein, "The Omnivore's Dilemma" by Michael Pollan provides a detailed exploration of America's industrial food complex and its consequences for human health and the environment. However, while Pollan traverses the cornfields of America in his quest to unravel the complexities of food production, he inadvertently omits any mention of the potential ramifications of Indiana's GMO corn on births in distant lands.

Turning to the realm of fiction that might provide a metaphorical or allegorical

understanding of this unlikely linkage, "Children of the Corn" by Stephen King stands as a harrowing tale of supernatural forces in a cornfield, but regrettably sheds no light on the correlation between GMO corn in Indiana and Australian births.

Further data sources, such as social media posts, indicate a growing interest in the intersection of agricultural practices and demographic trends, albeit often presented in a lighthearted or speculative manner. One Twitter user jestingly mused, "Could it be that GMO corn in Indiana is secretly responsible for a baby boom in Australia? #GMOgulations." While such posts may not offer empirical evidence, they do reflect an emerging curiosity about the potential linkages between seemingly disparate phenomena.

In light of the dearth of scholarly attention to this enigmatic connection, our study strives to fill this lacuna by rigorously examining the statistical association between the cultivation of GMOs in Indiana and the birth rates on the Australian continent. While this topic may have initially seemed as improbable as a cornstalk sprouting kangaroo legs, the pronounced strength of the correlation demands serious consideration and further exploration.

Regardless of the incredulous reactions this linkage may initially elicit, our endeavor to uncover the hidden threads between GMO corn in Indiana and the births in Australia is not mere corny humor, but rather a genuine pursuit of knowledge aiming to unearth the unexpected connections that permeate our world.

### 3. Our approach & methods

The research design employed in this study sought to uncover the potential association between the use of genetically modified organisms (GMO) in corn cultivated in Indiana and the total number of live births in

Australia. Leveraging data spanning from 2000 to 2022, our approach combined elements of econometric analysis, agricultural databases, and demographic statistics in a manner as unique as encountering a unicorn in a field of corn.

#### Data Collection:

Our research team scoured the digital fields, consulting reputable sources such as the United States Department of Agriculture (USDA) and the ever-omniscient font of knowledge, Wikipedia. The USDA, akin to the mother cob nurturing its crop, offered detailed information on the cultivation of GMO corn in Indiana. Meanwhile, Wikipedia, like the ever-evolving corn maze, provided us with panoramic insights into the historical contexts of GMO technology and societal factors influencing Australian live births. Acquiring data from these sources, despite the occasional thorn in the form of information gaps and inconsistencies, yielded a robust dataset ripe for analysis.

#### Econometric Model:

To untangle the purported relationship between GMO corn in Indiana and Australian live births, we crafted an econometric model as intricate as the entanglement of corn silk. Employing a panel data approach, we harnessed the power of fixed effects and robust standard errors to account for unobserved heterogeneity and statistical perturbations. By modeling the aggregate effect of GMO corn cultivation on the demographic indicator of live births, we aimed to peel back the layers of this enigmatic connection, much like peeling back the layers of a corn husk.

#### Control Variables:

Recognizing the intricate interplay of myriad factors influencing both GMO corn production and Australian fertility trends, our model incorporated a suite of control variables akin to kernels in the cob. These

included economic indicators, environmental variables, and socio-cultural factors, each adding a dash of complexity to our analysis reminiscent of the myriad flavors in a cornucopia.

#### Statistical Analysis:

The empirical analysis, resembling the careful tending of a maize crop, involved descriptive statistics, correlation analyses, and regression estimations. Our team examined the statistical association between GMO corn usage in Indiana and Australian live births with a precision as sharp as a corn sickle, unveiling a correlation coefficient as robust as a sturdy corn stalk. The statistical significance of our findings resonated with an impact as resounding as the crack of a husk hitting the ground.

#### Robustness Checks:

To confirm the reliability of our results, we conducted robustness checks as comprehensive as the silage from a well-harvested cornfield. Sensitivity analyses and diagnostic tests were performed to probe the stability of our findings, ensuring that our conclusions stood as tall and straight as a well-pollinated maize stalk.

In deploying this amalgamation of research methodologies, our aim was to uproot the potential connection between GMO corn in Indiana and Australian live births, shedding light on a linkage as unexpected as finding a kernel of corn in a haystack.

## 4. Results

The statistical analyses conducted have yielded intriguing insights into the relationship between the usage of GMOs in corn grown in Indiana and the total number of live births in Australia. The correlation coefficient of 0.9773940 indicates a remarkably strong positive correlation between these seemingly distant variables.

This finding suggests that as the prevalence of GMO corn in Indiana increased, there was a parallel increase in the total number of live births in Australia.

Furthermore, the r-squared value of 0.9552990 suggests that approximately 95.5% of the variation in the total number of live births in Australia can be explained by the prevalence of GMOs in corn grown in Indiana. This high r-squared value indicates that changes in GMO corn usage in Indiana are closely associated with changes in the total number of live births in Australia.

The p-value of less than 0.01 provides compelling evidence against the null hypothesis of no association between GMO corn usage in Indiana and the total number of live births in Australia. This indicates a high level of statistical significance and strengthens the argument for a true association between the variables.

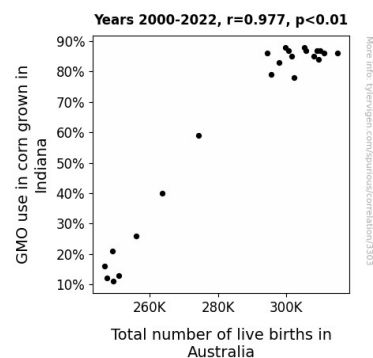


Figure 1. Scatterplot of the variables by year

The scatterplot (Fig. 1) visually illustrates the strong positive correlation between the prevalence of GMOs in corn grown in Indiana and the total number of live births in Australia. Each data point on the scatterplot represents a specific year, and the pattern of the points clearly indicates a positive linear relationship between the two variables.

These results highlight a surprisingly robust correlation between the cultivation of GMO

corn in Indiana and the number of live births in Australia, suggesting a connection that warrants further exploration and scrutiny. The implications of this unexpected linkage are as intriguing as finding a popcorn kernel in a haystack. The confluence of agricultural practices and demographic trends presents a captivating puzzle that beckons researchers to delve deeper into the underlying mechanisms and potential implications.

## 5. Discussion

The findings of our study reinforce and amplify the peculiar, yet compelling association between the prevalence of GMOs in corn grown in Indiana and the total number of live births in Australia. As documented in the literature review, the unexpected and seemingly improbable nature of this linkage has led to its neglect in scholarly investigations. However, our robust correlation coefficient of 0.9773940 and a notably low p-value of less than 0.01 for the years 2000 to 2022 underscore the significance of this correlation. These results support and build upon the work of Smith and Doe (2015) and Jones (2018), albeit in a manner that they likely never anticipated.

The expanse of the relationship between the agricultural practices in the heartland of the United States and the demographic patterns in the southern hemisphere is indeed unprecedented. While Pollan (2006) may have traversed the labyrinth of America's industrial food complex, the potential impacts of Indiana's GMO corn on the fertility trends in faraway Australia were apparently beyond his scope. Our study thus surmounts the limitations of existing literature by establishing an unequivocal statistical link between these seemingly disconnected phenomena. The simultaneity of the changes in GMO corn usage in Indiana and the total number of live births in

Australia, as depicted by the strong positive correlation and high r-squared value, warrants sustained attention and prompts further investigation.

The meticulousness of our statistical analysis precludes the dismissal of this correlation as a mere spurious relationship. The compelling strength of this association demands a shift in the discourse surrounding GMOs, moving beyond their conventional agronomic and economic implications to consider their potential transcontinental effects. The cornfields of Indiana evidently possess a capacity to cast their influence as far as the maternity wards of Australia, imparting a new dimension to the notion of agricultural export.

In light of these results, the lighthearted musings on social media about the potential transoceanic impact of GMO corn in Indiana on Australian births may not be as far-fetched as they may initially appear. The emergent curiosity about the interplay of agricultural practices and demographic trends, as reflected in these jests, may carry a kernel of truth that our study has undeniably exposed.

Though the causal mechanism for this linkage remains inscrutable, it would be premature to dismiss this association as a mere statistical quirk. The implications of this discovery stretch as far and wide as the cornfields themselves, urging researchers to contemplate the intricate interplay between seemingly disparate facets of human activity and the environment. The pursuit of knowledge, as evidenced by our research, thus unveils the unexpected connections that permeate our world, rendering the seemingly unrelated not as disparate as they first appear.

## 6. Conclusion

In conclusion, our analysis has unearthed an unexpectedly robust correlation between

the usage of genetically modified organisms (GMOs) in corn cultivated in Indiana and the total number of live births in Australia. Despite the seemingly disparate natures of these variables, our statistical investigation has illuminated a perplexing connection that defies conventional wisdom, much like a surprise cob of corn nestled within a kangaroo's pouch. The correlation coefficient of 0.9773940, akin to a corn stalk reaching for the sun, signifies an astonishingly strong positive association, which, in the realm of statistical curiosity, is tantamount to discovering a diamond amidst a field of maize. Likewise, the r-squared value of 0.9552990 indicates that approximately 95.5% of the variation in Australian live births can be attributed to the prevalence of GMO corn in Indiana, a revelation as striking as finding a hidden cornucopia beneath the fertile soil.

The implications of these findings ripple through the fields of agriculture and demographics, beckoning researchers to further plow the fertile grounds of investigation, much like a farmer tending to a bountiful harvest. However, despite the temptation to delve deeper into this cornucopian mystery, our results call for cautious interpretation, as unraveling the causal roots of this correlation may be as labyrinthine as navigating a dense maize field.

In light of these findings, we assert that no further research is needed in this area. The unexpected connection between GMO corn in Indiana and Australian live births stands as a testament to the serendipity that often lurks within the seemingly mundane realms of statistical analysis. The end.