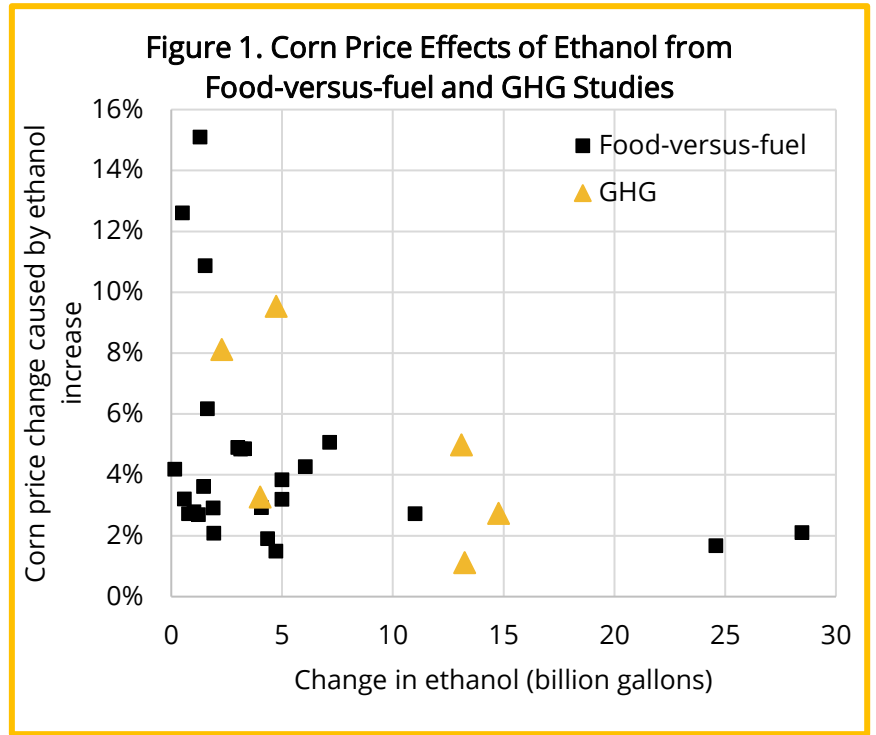




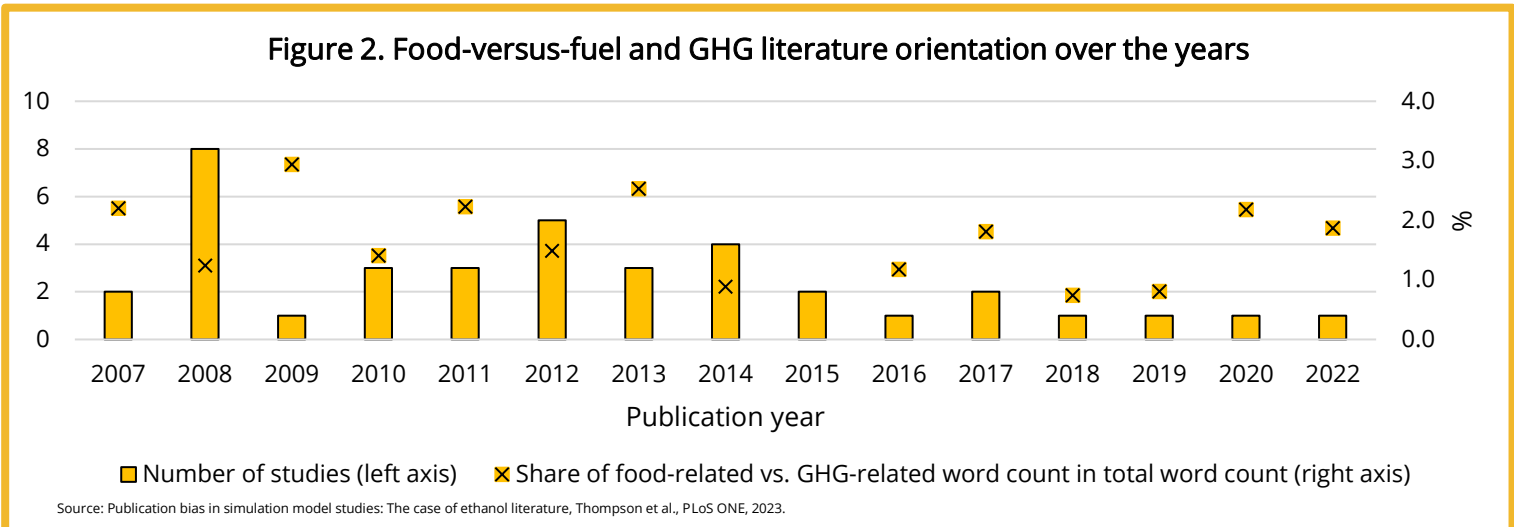
Corn Starch Ethanol Effects on Corn Prices and A Tale of Two Stories

The introduction of U.S. biofuel use mandates in 2005 and the subsequent climb in commodity prices have spurred research investigating the impacts of corn starch ethanol on corn prices. In a recently published [article](#), FAPRI-MU researchers investigate the possibility of such correlation and whether a study is oriented toward food-versus-fuel or greenhouse gas (GHG) emission literature.

The authors reviewed 519 reports and articles published from 2005 to 2022 and extracted 221 estimates focusing on changes in corn starch ethanol production. To test whether “only big results get published” (which indicates if publication bias is present because of a systemic preference for big numbers, then results from models generating large price effects would be more likely to become food-versus-fuel publications and vice versa), the authors proposed a new approach that measures the density of food-related versus GHG-related word count in each study, categorizing the literature into two stories (Figure 2).



The average impact on corn price from 38 studies selected for the analysis is found to be \$0.23 per bushel, or 5%, per additional billion gallons of corn starch ethanol. Most studies suitable are oriented toward food-versus-fuel literature with a wide range of corn starch ethanol and corn price effects (Figure 1). Finally, no strong relationships were identified between the impact of ethanol on corn prices and the tendency of a study being published in the food-versus-fuel or GHG literature. While the review exclusively examines simulation studies and refrains from making assertions regarding the effects of U.S. biofuel mandates, its discovery of an absence of publication bias provides reassurance for individuals dependent on scientific studies' estimates for their decision making, policy analysis or research advancement.



Source: Publication bias in simulation model studies: The case of ethanol literature, Thompson et al., PLoS ONE, 2023.