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## The economic and environmental impacts of UK meat imports post-Brexit

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The United Kingdom (UK), a high consumer of meat, has traditionally relied heavily on the European Union for its meat imports. However, with the advent of Brexit, the UK now faces the imperative of identifying potential meat-importing nations. The choices of different meat import countries not only impact the economy and environment of the UK but also other countries around the world. This study builds the UK Meat Trade-centred World Input-Output Model (UK-MTWIO), incorporating diverse import data within various scenarios. With different scenarios considering costs, GHG emission and animal welfare, this study analyzes the economic, environmental and animal welfare impacts on the UK and other countries worldwide. The novelty involves the comprehensive consideration of scenario setting, the application of RAS method as well as the animal welfare analysis with the method of world input-output model. The study reveals that beef imports have the most significant impact on the imports of the lamb and pork. Meanwhile, the changes in the UK's meat trade may change the trade partners of some major meat-importing countries. In terms of environment, some import scenarios have the potential to contribute to GHG emissions reduction in the global agricultural sector: CHN, MEX, and JPN are typical countries that are significantly impacted. The results of this study provides valuable insights for policymakers making meat trade decisions post-Brexit.

