Predicting Long-Term Meat Productivity for the Kingdom of Saudi Arabia

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Abstract : Livestock is one of the fastest-growing sectors in agriculture. If carefully managed, have potential opportunities for economic growth, food sovereignty and food security. In this study we mainly analyse and compare long-term i.e. for year 2030 climate variability impact on predicted productivity of meat i.e. beef, mutton and poultry for the Kingdom of Saudi Arabia w.r.t three factors i.e. i) climatic-change vulnerability ii) CO2 fertilization and iii) water scarcity and compare the results with two countries of the region i.e. Iraq and Yemen. We do the analysis using data from diverse sources, which was extracted, transformed and integrated before usage. The collective impact of the three factors had an overall negative effect on the production of meat for all the three countries, with adverse impact on Iraq. High similarity was found between CO2 fertilization (effecting animal fodder) and water scarcity i.e. higher than that between production of beef and mutton for the three countries considered. Overall, the three factors do not seem to be favorable for the three Middle-East countries considered. This points to possibility of a vegetarian year 2030 based on dependency on indigenous live-stock population.

Keywords : prediction, animal-source foods, pastures, CO2 fertilization, climatic-change vulnerability, water scarcity
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