

Subject: Review of MS902 for Economics-ejournal
Date: April 9th, 2013

The contribution of this paper is potentially extremely significant but it is difficult for the reader to ferret this out. I am assuming that the audience is expected to be individuals for whom the subject of this article is not their specific field of study. There are a number of important climate modeling runs initially that provide valuable information. However, as one moves into the scenarios the paper needs more description and interpretation. For example, it is difficult to interpret something like figures 7 & 8 and what they are intended to convey. What meaning is the reader to attach to the differences in the basic characteristics of the different models used? In Figures 12-15, can something be said about why these resulting yield differences occur? What are the important model artifacts that give these different results? In Figures 14 and 15, what brings about these yield increases (the green areas) and how significant are they? How do the differences above relate to what then goes into the IMPACT model?

Beginning on page 18 with the IMPACT model, interpreting what is going on becomes more difficult with the increase in the number of combinations and permutations. IMPACT adds on a supply/demand/trade/price model and the results from these runs are difficult interpret. Since we have now combined climate, plant growth, economic factors, etc. the complexity is such that the reader looks at the results with little understanding of what is driving the results or what they mean. What are the major drivers, and for which scenarios? With many possible combinations and permutations the results become much less meaningful. The reader has difficulty tracing back things that may have been obvious to the writer. (Maybe if one took one of the whiskers and deconstructed/partitioned it by the different climate models or other main drivers, that might help give an understanding of what was behind it.) There are some additional problems with clarity. For example, on the middle of page 19 there is a note that talks about IMPACT's most optimistic future yields for corn and soybeans falling far short of the late 20th century. The reader then goes back to the referenced figures 10 and 11 and looks at the IMPACT Max lines which appear to rise well above the late 20th century seven year moving average. In looking at the IMPACT whisker graphics for the various crops (figures 18-23) is it possible to say more about what drives them? Why in some instances are the pessimistic, baseline and optimistic outcomes the same? How much is it prices, how much climate, how much population growth? There is no discernible set of results here relating specifically to economics. The reader also needs information about the 3 graphics on pages 26 & 27. Are these to separate out the climate change impacts from all the other factors included in IMPACT? If so, what does the graphic tell us?

This article leaves the reader with the "so what" question. The work may have high internal validity, but it is not presented in a way that makes the results interpretable or very usable.