

Peer Review Plan

Preliminary Title: Evaluating the Prediction Performance of the International Food Security Assessment's Production Models: A Cross Validation Approach

Type of Report (ERR, EIB, EB, TB, SOR,)
TB

Agency: Economic Research Service [X] Influential Scientific Information
USDA [] Highly Influential Scientific Assessment

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Subject of Review: The ERS International Food Security Assessment (IFSA) model was developed to help USDA and its stakeholders evaluate the food security status of low- and middle-income countries. The current production module of the IFSA model aggregates a panel of agricultural production data for the 76 countries in the assessment to provide model-based estimation and projection of yield and area dynamics. This research extends the existing production model to help conduct model based performance evaluation criterion to select the best performing model specification. This is done using a Cross Validation approach called a "leave-one-out-cross-validation" (LOOCV) to simulate their out-of-sample prediction performance.

Purpose of Review: The purpose of the review is to ensure the high-quality of the economic analysis, transparent explanation of methods, objective interpretation of results, and effective communication to the intended audience.

Type of Review: [] Panel Review [X] Individual Reviewers
[] Alternative Process (Briefly Explain):

Timing of Review (Est.): Start: 12/9/2021 Completed: --/--/--- Withdrawn: --/--/----

Number of Reviewers: [] 3 or fewer [x] 4 to 10 [] More than 10

Primary Disciplines/Types of Expertise Needed for Review: Economists

Reviewers selected by: [X] Agency [] Designated Outside Organization
Organization's Name:

Opportunities for Public Comment? [] Yes [X] No

If yes, briefly state how and when these opportunities will be provided:

How:

When:

Peer Reviewers Provided with Public Comments? [] Yes [X] No

Public Nominations Requested for Review Panel? [] Yes [X] No