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TRENDS AND PROBLEMS IN FORECASTING THE YIELD OF AGRICULTURAL PRODUCTS INCLUDED IN THE CONSUMER BASKET USING THE POSSIBILITIES OF PRACTICAL PROGRAMS

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ABSTRACT

The trends and issues analyzed here give cause for hope and concern. Great progress has been made in reducing hunger and poverty and improving food security and nutrition. Productivity and technological advances have helped improve resource efficiency and food security. But major concerns remain. An estimated 795 million people still suffer from hunger and more than two billion suffer from forms of micronutrient deficiency or overnutrition. In addition, global food security may be at risk due to increasing pressure on natural resources and climate change, both of which threaten the sustainability of food systems. If current trends continue, planetary boundaries may be exceeded. This article talks about the forecast of agricultural products included in the consumer basket.

INTRODUCTION

Our assessment of current trends shows that transformative changes in agriculture and food systems around the world are required to realize the vision of action programs. Here are 10 key challenges that must be addressed in order to succeed in eradicating hunger and poverty while making agriculture and food systems sustainable in action programs. Among these challenges are uneven demographic expansion in the coming decades, threats from climate change, increased natural disasters and the rise of transboundary pests and diseases, as well as the need to adapt to major changes in global food systems.

LITERATURE ANALYSIS AND METHODOLOGY

Forecasting has always been at the forefront of decision-making and planning. The uncertainty surrounding the future is both exciting and challenging, as individuals and organizations seek to minimize risk and maximize utility. A large number of forecasting applications require different forecasting techniques to solve real-life problems. This article presents a non-systematic overview of forecasting theory and practice. We provide an overview of a wide range of theoretical, state-of-the-art models, methods, principles, and approaches for preparing, producing, regulating, and evaluating forecasts.

RESULTS

A forecasting method is defined here as a sequence of predetermined steps that

produce forecasts over future time periods. Most forecasting methods, but certainly not all, have corresponding stochastic models that produce the same point forecasts. The stochastic model provides a data generation process that can be used to generate prediction intervals and entire prediction distributions in addition to point forecasts. Every stochastic model makes assumptions about a process and its associated probability distribution. Although the forecasting method has an underlying stochastic model, the model need not be unique. For example, a simple exponential smoothing method has several stochastic models, including state space models that may or may not be homoscedastic (ie, have constant variance). Combining predictions from different methods has been shown to be a very successful forecasting method. A combination of relevant stochastic models, if they exist, is itself a model. Forecasts can be developed through a process that incorporates new and/or existing forecasting methods/models. Of course, these complex processes will also be forecasting methods/models.

CONCLUSION

It is important to consider the nature of the variables and their involvement in the forecasting process. In univariate forecasting, forecasts are developed for a single time series using data from the historical values of the time series. In multivariate forecasting, other time series variables are involved in producing forecasts, such as time series regression. Univariate and multivariate forecasting may allow for interventions (eg, special promotions, extreme weather). The relationship between variables and other types of inputs may be linear or may include non-linear structures (eg market entry of a new technology). If an exact functional form is not available, methodologies such as simulation or artificial neural networks can be used. Theories from fields such as economics, epidemiology, and meteorology can be an important part of developing these relationships. Multivariate forecasting can also mean forecasting several variables at the same time (e.g. econometric models).

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