CRITERIA FOR IDENTIFYING
CANDIDATE YIELD MODELS

AgRISTARS
Yield Model Development
Project

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1.0 INTRODUCTION

The purpose of this document is to describe criteria for identifying yield models for testing and evaluation for possible use, either domestically and/or in foreign areas, by the United States Department of Agriculture (USDA), and in setting priorities for the test and evaluation operation. As such, this document is the product described in the Yield Model Development Project Implementation Plan, Major Project Element #1, Task 1, Subtask 1.

2.0 CRITERIA

The criteria listed below are separated into two groups. The first group contains very general criteria for determining which models should actually go into the test and evaluation process. The second group of criteria are more detailed and are for use in determining the time frame in which candidate models would be tested and evaluated, and the magnitude of preparation required before testing can begin.

2.1 Group 1

Each of the following criteria must be answered 'YES' if a model is to qualify for test and evaluation by AgRISTARS.

1. Can the model be used to develop large area yield forecasts, or does it provide some unique capabilities for improving yield forecasts?

2. Does the model show potential for satisfying the criteria in the Crop Yield Model Testing and Evaluation Document?

3. Are (Will) the computer programs, documentation, and necessary data sets (be) available for testing?

4. Is (Will) the model (be) available for use in the public domain?

2.2 Group 2

The following criteria will be used to determine the most promising qualifying models for testing and evaluation by AgRISTARS.

2.2.1 Conformity to User Requirements:

    a. To what extent has the model been developed (or tuned) for a crop and region of current interest to USDA and/or other AgRISTARS project elements?

    b. Is the model only a full-season estimation model, or can it also produce forecast estimates at intervals during the growing season?

    c. Does the model appear to be extendable to regions of intended future application?

2.2.2 Resources Required:

    a. What are the required resources, including time, personnel and other resources, of setting-up and running of the model in an AgRISTARS test environment?

    b. What resources will be required to obtain and format data sets?

2.2.3 Data Requirements:

    a. Are the required data available on a routine basis in the test and evaluation area?

    b. Are the required data routinely available in regions of probable future interest? If not, could it become available in the near future?

2.2.4 Model Complexity and Operating Costs:

    a. How difficult and/or costly will the model be to operate for testing?

    b. What conceptual problems arising out of the model's complexity need to be resolved before testing can begin?