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CLOSEOUT REPORT OF AID GRANT NO. DAN-4127-G-22-7085

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The work completed in connection with this Grant exceed the scope and funding provided for in the Grant. The principal accomplishments are listed as follows:

1. Use of synthetic daily climatic data generated by the WMAKER weather generating model was compared with use of actual daily data in predicting crop yields or crop growth and development from several of the crop yield models. The comparisons are very favorable.

2. A manual, "Manual for Dryland and Irrigated Crop Production," was prepared in English and Spanish.

3. Climatic data tables for use with the WMAKER and crop yield models were prepared for Africa, Latin America and selected Asian Countries.

4. A course, "Potential Crop Production from Irrigated and Dryland Agriculture," was given in Logan, Utah for international participants. Another course is scheduled for February 18 through March 17, 1990.

5. Comparisons of estimated yields using the models and crop genetic coefficients indicate large differences in yields from different cultivars of the same crop species. This research clearly indicates the large potential value of the models for selecting the best cultivars for a given climate or the best climates for a new or for a selected cultivar.

6. The use of the models for evaluating the economic benefits from dryland farming and irrigation supplemental to rainfall were demonstrated and various professional papers were published.

The activities and accomplishments funded under this Grant clearly indicate that continuing activities can have a very large impact on future food production in the developing countries. In order that this large impact can be promoted, the following recommendations are made:

1. That the WMARKER model be simplified so as to require less computer capacity and that the variability of synthetic daily climatic data generated be made to more nearly simulate the variability of actual data.

2. That a compilation of the crop genetic coefficients of various cultivars of food crops be complied and published. The more important crops recommended for priority include: maize, casava, millet, wheat, sorghum, groundnut, and soybeans.

3. That training in the use of the technologies developed by this Grant be widely sponsored.

cc Ray Meyer
Worth Fitzgerald