

# **Computer-Aided Irrigation Scheduling A Case Study: Design of Irrigation Schedules for St. Mary Banana Estates, Jamaica**

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## **Abstract**

The IRSIS (Irrigation Scheduling Information System) computer software package was used to evaluate irrigation of the 1999 banana crop at the St. Mary Banana Estates Limited, Jamaica Producers Group. In addition, the software was used to plan irrigation schedules for dry, normal and wet conditions for banana grown at the same estate. Crop and field parameters were either measured in the field or obtained from published texts; whereas, the climatological input was collected from the meteorological station located at the estate. The irrigation schedules using IRSIS were planned in such a way that for the convenience of operation, the irrigation depth was kept constant throughout the growing season and the irrigation interval varied as a function of changes in the climatological situation (principally rainfall) or the water consumption pattern of the banana crop. Simulation results showed that the time of starting or terminating irrigation within the year in the banana estate would vary according to whether the rainfall depths were dry, normal or wet. For instance, while irrigation for the dry year should ideally occur between April and October, it is only required between June and September for the wet year, with abundant rainfall.