Okeechobee Isolated Wetlands:
Influences of Hydroperiod on Plant Community Composition and Forage.

J.M. Neumann and M.W. Clark

The Lake Okeechobee agroecological watershed has been implicated as a contributor to eutrophication of the lake. Numerous efforts and Best Management Practices are being implemented to meet the target phosphorus (P) TMDL. Currently, the Florida Ranchlands Environmental Services Project (FRESP) is a partnership of federal, state and private parties that will evaluate the environmental benefits and financial feasibility of this reductive TMDL at the watershed scale under a pay-for-environmental-services program. One service to be compensated is any increase in wildlife habitat, which in this case will be measured by an increase in area of wetland plant species. However, ranch owners are also interested in any potential losses of pasture carrying capacity due to changes in forage species. To address these questions, this study investigated a) how plant species respond to changes in hydroperiod and b) how preferred cattle forage species respond to changes in hydroperiod. Using an investigational rapid field assessment methodology first developed for underwater surveys of coral, a visual basic random point count program was utilized to evaluate plant transects captured with digital photographs. This photo processing program facilitated image interpretation for species present and general ecological population statistics. That data is presented as an evaluation of the objectives. It has shown that pasture hydroperiod and vegetative communities undergo dynamic inter-annual changes in climate. The evaluation of this CPCe methodology provides an effective tool for vegetation transect monitoring and the documentation of services in low herbaceous plant communities for the program.