

## 친수생태적 농업수자원 관리방안

박 승 우

(서울대학교 농업생명과학대학)

The water intakes for irrigation are estimated to account for over sixty percent of the nation's off-stream water uses. Yet, agricultural water resources are not enough to ensure the water supply during drought spans of moderate magnitude. Significant number of the water resources are heavily polluted mainly from untreated sewer and animal manure. Most of them fail to provide with instream water requirements for downstream aquatic systems. Proper measures need to be taken for healthy aquatic systems, which include efficient water uses, preserving water quality, and allocating instream requirements in water resources planning and development. Other factors that may adversely affect the ecosystems are pollutants from croplands such as sediment and chemical fertilizers and pesticides. Field monitoring results have indicated that the nonpoint source pollution is not threatening the fates of aquatic lives nor significantly responsible for water quality degradation, as compared to other sources. Administrative and institutional efforts are needed, however, to reduce the nonpoint source pollution as much to improve the environmental quality. Recent initiatives to promote phil-environment farming may contribute reducing the loadings from crop lands. They include the reduction in chemical fertilizer and pesticide applications by thirty percent. Field researches and technical transfer seem needed to promote such measures. This paper also addresses strategies that may help reinforce our efforts to restore valuable freshwater ecosystems, which includes wastewater reuse and sustainable water resource development measures.