In conclusion, the implementation of a Fuzzy Logic–based irrigation system marks a transformative step towards intelligent and sustainable agriculture.By effectively managing the inherent uncertainties and complexities of crop–water–soil–climate interactions, this system provides a robust and adaptive alternative to conventional irrigation methods.Ultimately, the fuzzy irrigation system exemplifies how soft computing techniques can be harnessed to address pressing environmental and resource–management issues, paving the way for a more efficient, responsive, and sustainable future in agricultural water management.

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