عنوان مقاله:

Assessing crop water productivity at Nyanyadzi smallholder irrigation scheme in Zimbabwe

محل انتشار:

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خلاصه مقاله:

This study determines the effects of variations in relative water supply (RWS) on bean and wheat crop water productivity (WP) under irrigation in Block C at Nyanyadzi irrigation scheme in Zimbabwe. Water supply, bean and wheat crop yield data spanning ۱۷ cropping seasons from ۱۹۷۰ to ۲۰۰۳ were obtained from the irrigation scheme files. Research findings show a weak and significant (R۲=۰.۴۴۸, p = ۰.۰۰۶) quadratic relationshipbetween bean WP and RWS. Whereas, for the wheat crop, the relationship WP and RWS is a linear and significant (R۲ = ۰.۴۳۸, p = ۰.۰۰۴). Based on the research findings, the study recommends the measures to improve water supply and therefore, crop production. These include among others, switching to more drought tolerant crop varieties that require less water, rainfall harvesting, water conservation measures to retain soil water and, use of more efficient water application methods.

کلمات کلیدی:

Crop Water, Irrigation Performance, Nyanyadzi Irrigation Scheme, Relative Water Supply, Water productivity