

ADOPTION OF DRIP IRRIGATION IN MALAWI AND LESSONS LEARNT FROM FARMERS EXPERIENCES

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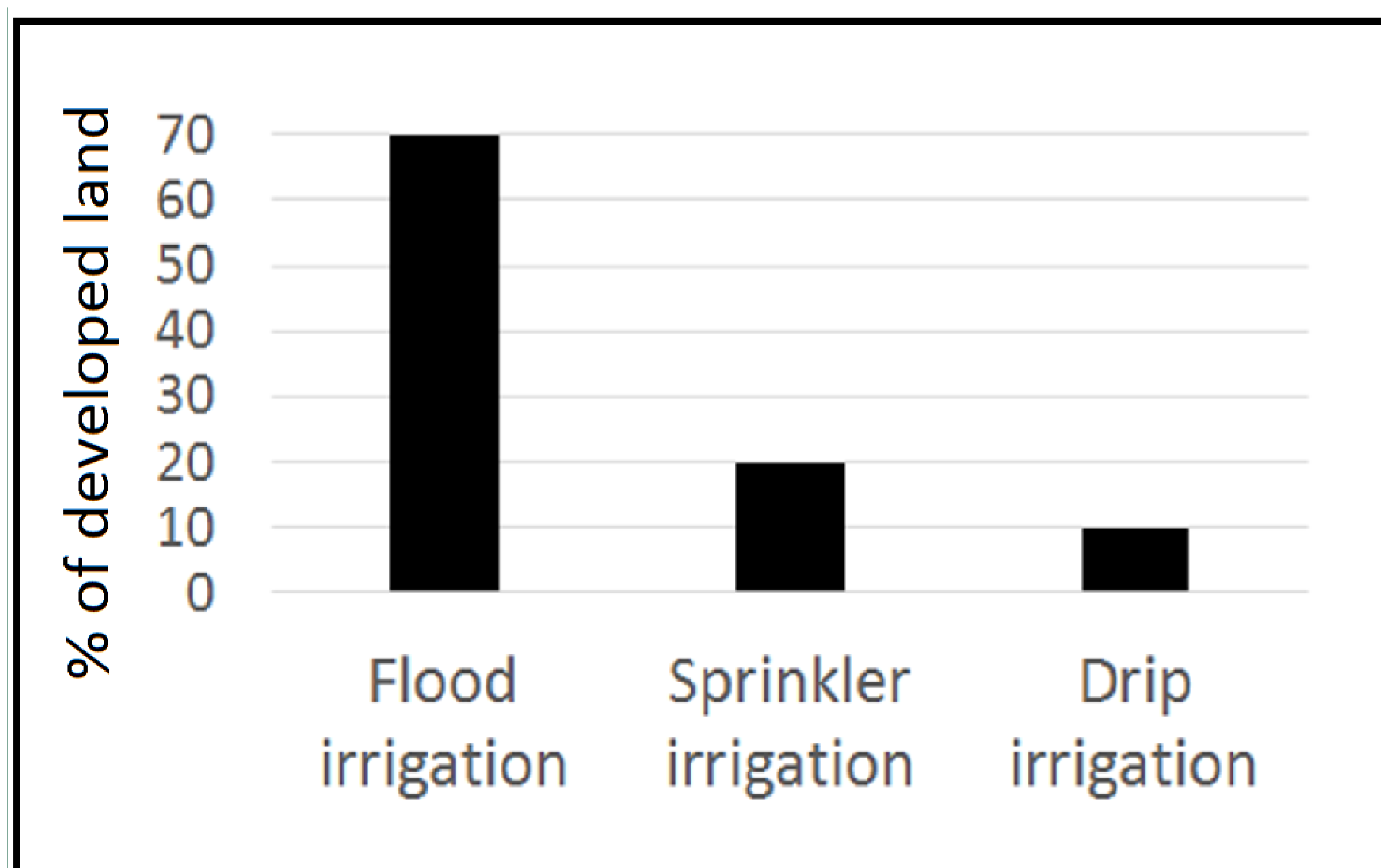
Abstract

Out of the total 600,000 ha with an irrigation potential in Malawi, 150,000 ha have been developed for irrigation, with only 10% of the developed land under drip irrigation, seconded by sprinkler irrigation with a 20% and flood based irrigation with a 70% adoption. While various components of sprinkler irrigation systems are manufactured locally, which has also enhanced their availability on the local market, drip irrigation system components such as, drippers, filters, valves and pressure gauges are normally imported from India and South Africa. On the other hand, components of flood based irrigation systems are easily accessed on the local market, as they are also manufactured locally. Not surprising, nearly 60% (n=35) of interviewed farmers practicing drip irrigation reported they have at one time supplied irrigation water to their crops without drippers on the lateral pipes, as it normally take four weeks for the components to be procured. Suggested measures to increase the adoption rate of drip irrigation systems in the country include: strengthen the National Irrigation Policy to include the adoption of water efficient irrigation systems; training farmers to view irrigation water as an economic good, as well as putting a deliberate effort aimed at subsidizing drip irrigation components and tailoring drip irrigation systems to local conditions.

Water management at scheme level

The National Irrigation Development Policy emphasizes on increasing the irrigation hectare and irrigated food production levels. In the face of increased evapotranspiration and the high demand for irrigation water, focus must also be extended to ensuring that farmers are shifting away from less efficient irrigation systems such as flood based irrigation. It was not surprising that 70% (n=70) of small-scale irrigation farmers could not provide information regarding irrigation water productivity of various crops grown in their respective fields.

Figure 1: Extent of different irrigation methods in Malawi (% of irrigated land)



Apparently, data and information on crop yield history could not be provided by farmers, as they are deemed less important by farmers. This indicates that irrigation farmers are more interested in irrigation infrastructure that supports optimizing crop yields and not on increasing irrigation water productivity.

Figure 2: A demonstration field of a drip irrigation system connected to a rope and washer hand pump



Figure 3: A shallow well used as a source of water for irrigation by smallholder farmers



Conclusion

Unavailability of locally manufactured drip irrigation system components limits the adoption of drip irrigation system by local farmers in Malawi. In addition, the national irrigation development policy emphasizes on optimizing crop yields from irrigated lands as opposed to increasing crop yields with less irrigation water. Deliberate efforts must be put in place to ensure increased irrigation water productivity in smallholder irrigation schemes in Malawi.