

Terms of References for hiring an expert from Netherlands on improving water use efficiency through application of subsurface irrigation and other efficient water use systems

Oman is considered as an arid country with low rainfall, high temperature and very high evaporation rate. As largest amount of groundwater resources is consumed in the Sultanate, adopting high efficient irrigation systems would expectedly contribute to a significant water saving. In this respect, subsurface drip irrigation system has been proved to give higher water use efficiency and better water productivity than other irrigation systems as water is directly injected in the root zone eliminating direct evaporation from soil surface. Ministry of Agriculture and Fisheries has evaluated subsurface drip irrigation in date palm cultivation. The results showed that subsurface drip irrigation system contributes to water saving by 40% without a reduction in fruit production of date palm. There is a rapid progress in the development and use of subsurface irrigation system not only to irrigate date palm cultivation but also other crops with other types of subsurface irrigation system.

The surface irrigation (flood) is by far the most dominant means of irrigation accounting for 75% of the irrigated area in Oman. Therefore, this type of irrigation needs research efforts towards its technical improvement for higher water use efficiency.

The Kingdom of the Netherlands has abundant experience and progress in the application of subsurface irrigation systems and other agricultural systems of high water use efficiency. It is important for the Sultanate to take the advantage of its experience and achievements of application of such techniques without spending more effort, time and budget on new research and studies. We believe that the Dutch experience could help contribute to improving water efficiency in the Agriculture in Sultanate of Oman.

More information and responses to this call can be sent to Marrieke van Oversteeg at marrieke-van.oversteeg@minbuza.nl / mus-ea@minbuza.nl.