Abstract

An experiment was carried out at Kiomo Agroecological zone 5 to compare the water use efficiency (WUE) and economic benefits of using spot, modified drip (bucket) and furrow irrigation methods. Each of these application techniques was combined with 0, 10 t ha-1 of manure and DAP at 200 kg of ha-1. The use of manure combined with fertiliser produced higher quantities of fresh tomatoes, improved WUE and had higher economic benefits. The modified drip and spot irrigation with fertiliser did not differ significantly but produced higher amounts of fresh tomatoes than furrow irrigation. The WUE of spot was superior to that of the other techniques in treatments that received a combination of manure and fertiliser. Without fertiliser the modified drip had higher WUE than the rest. Applying water in spots with fertiliser and its combination with manure had the highest income followed by similar treatments using the modified drip technique. The modified drip was the most efficient in the use of labour and had higher returns in treatments with fertiliser combined with manure.