

Crop water requirement at different growing stages of pineapple production in BRIS soil

ABSTRACT

The BRIS (Beach Ridges Interspersed with Swales) soils are the sandy marine deposits at the east coast of Peninsular Malaysia. The area is less suitable for usual field crops. Pineapple (*Ananas comosus*) may be introduced in the area for commercial cultivation. An experiment was conducted in the glass house condition of UPM. Pineapple plants were nurtured in the lysimeters, filled with BRIS soil, to assess the water requirements at different growth stages. Highest requirement of irrigation water was found 2.43 mm/day in initial stage (1). Subsequent development stage (2), mid-stage (3) and ripening stage (4) required smaller amount of irrigation water (approximately 1.55 mm/day). The daily average evapotranspiration (ET_c) was 0.83 mm/day in Stage 1, followed by 0.73 mm/day in Stage 2. The lowest ET_c was found 0.65 mm/day in Stage 3. The estimated crop coefficient (K_c) was found maximum 0.51 in initial stage. The K_c values showed a continuous decreasing trend up harvesting time. The second highest K_c value was 0.37 in development stage followed by 0.33 in mid-stage and minimum 0.30 during ripening stage.

Keyword: Beach Ridges Interspersed with Swales, Pineapple, *Ananas comosus*