4. RESULTS AND DISCUSSION

The objectives of this study were: (i) to investigate distribution of moisture and salt in vertical and horizontal directions around the emitter; (ii) to study the effect of drip irrigation management on the distribution of salt and water in the soil during the season; (iii) crop yield productions as a function of irrigation management parameters namely emitter flow rates and irrigation intervals.

4.1 Soil moisture distribution pattern in drip irrigated clay soil:

Study of water distribution throughout soil profile under drip irrigated clay soil conditions is the must for better irrigation management. The most important parameters of drip irrigation management are emitter flow rate and irrigation intervals i.e. rate and amount of water applied per irrigation. These two management parameters may affect soil moisture and salt distribution, and consequently affect crop yield.

4.1.1 Effect of emitter flow rates on soil moisture distribution patterns:

Fig (4.1) and (4.2) show soil moisture distribution patterns under different emitter flow rates (2.4 and 6 L/h) for 3 days irrigation intervals at both flowering and harvesting stages. It could be observed that soil moisture content always lower than field capacity thus it ranged between 90%–90% and 85%–70% of field capacity for both flowering and harvesting stages.