

Nabataean Traditions of Soil Conservation and Water Harvesting

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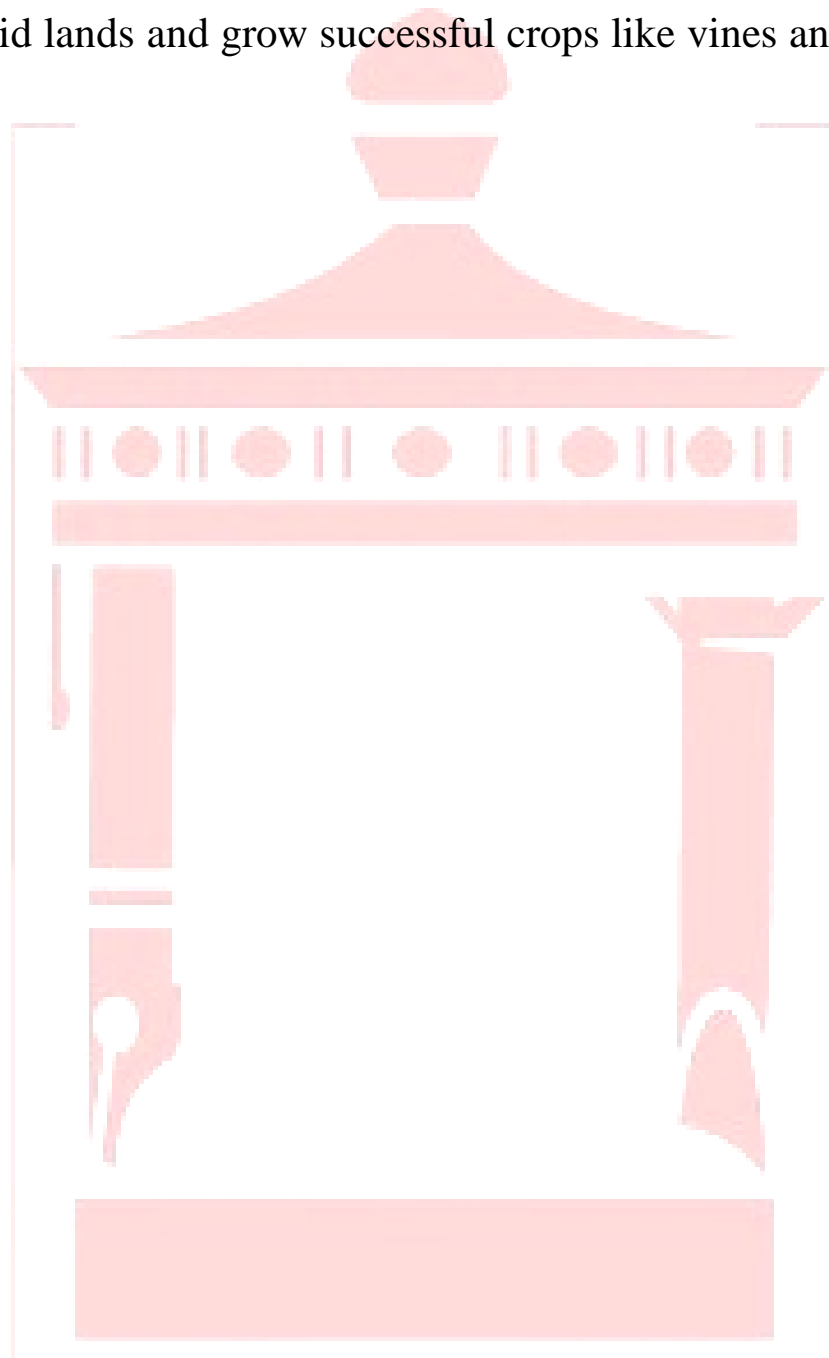
Nabataean-controlled territories of Southern Bilad Ash-Sham (Geographic Syria) is characterized by its arid Semiarid to climate, Under such a climatic condition , soils exhibit poor structural stability , This has been manifested by low infiltration rate and extensive soil erosion and high runoff coefficient , Subsequently, mitigation of soil degradation and persistent drought has been an ancient tradition. Archeological evidences showed signs of early water harvesting facilities believed to have been structured over 9000 years ago in the Edom mountains of Southern Jordan .

Deflection dams and gravity canals may also be observed in the very ancient urban settlement of Jawa (3200 BC)in the north East of Jordan , Nabataean Arabs (300 BC) were pioneers in hydraulic technology and soil and moisture conservation , especially the well known stone mounds that most likely had served as “stone mulch “ and “air wells “protecting surface soil from excessive heating and drying and apparently helped vines growing in the arid environment of the Negev Desert.

Most common water harvesting and conservation techniques are these of collection , detention , dispersion and diversion structures, In addition ,techniques of caves and tunnels dug deep in the bed rock were employed in many parts of the region with a major objective of reducing water loss to evaporation . Such techniques carry names like “Haraba “in southern Palestine and /or “Magara “in southern Jordan . conventional methods employed in soil conservation include contour cultivation , soil ripping , soil terracing ,especially

diversion and contour banks and gradoni , bench , and stone terraces .

All these methods enabled the Nabataean Arabs cultivate their arid lands and grow successful crops like vines and cereals .



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