



Fig. (S1). PCR bands pattern of studied *Capparid spinosa* L. varieties; *canescens* (1), *deserti* (2), *inermis* (3) with ISSR primers: 44-B, HB-9, HB-10, HB-12 and HB-15 (a) and SCoT primers: SCoT-1, SCoT-2, SCoT-3, SCoT-4 and SCoT-6 (b).

Table (S1). Banding pattern produced by ISSR primers; (1) indicating presence (0) indicating absence of band. *Capparis spinosa* L. varieties; *canescens* (1), *deserti* (2), *inermis* (3).

44B	Band No	M.W bp	Species								
			1	2	3	4	5	6	7	8	9
	1	615	1	0	0	0	1	1	0	0	0
	2	580	0	0	1	1	0	0	1	0	0
	3	490	0	1	0	1	0	0	0	1	1
	4	465	1	1	1	1	1	1	1	1	1
	5	345	1	1	1	1	0	1	1	1	1
	Total		3	3	3	4	2	3	3	3	3
HB-9	1	1375	1	1	1	1	1	1	0	1	1
	2	920	1	1	1	0	0	1	0	0	1
	3	760	1	1	1	1	1	1	1	1	1
	4	600	1	1	1	1	1	1	1	1	1
	5	500	1	1	1	1	1	1	0	0	1
	6	415	1	1	1	1	1	1	1	1	1
	Total		6	6	6	5	5	6	3	4	6
HB-10	1	1430	1	1	0	1	1	1	0	0	1
	2	1160	0	1	0	1	0	1	1	0	1
	3	830	1	1	1	1	1	1	1	0	1
	4	650	0	0	1	0	0	1	1	1	1
	5	460	1	1	1	1	1	1	1	1	1
	6	300	1	1	1	1	1	1	1	1	1
	Total		4	5	4	5	4	6	5	3	6
HB-12	1	2340	1	0	1	1	1	1	0	0	1
	2	1760	1	1	1	1	1	1	1	0	1
	3	930	0	0	1	1	0	1	0	0	1
	4	630	1	1	1	1	1	1	1	1	1
	5	320	0	0	1	0	1	1	0	0	1
	6	285	1	1	1	1	1	1	1	1	1
	Total		4	3	6	5	5	6	3	2	6
HB-15	1	1290	0	0	1	0	0	0	0	0	0
	2	825	0	0	1	0	0	0	0	0	0
	3	715	0	0	0	0	1	1	1	0	0
	4	615	1	1	1	1	1	1	1	1	1
	5	400	1	1	1	1	1	1	1	1	1
	Total		2	2	4	2	3	3	3	2	2

Table (S2). Banding pattern produced by SCoT primers; (1) indicating presence (0) indicating absence of band. *Capparis spinosa* L. varieties; *canescens* (1), *deserti* (2), *inermis* (3).

SCoT 1	Band No	M.W bp	Species								
			1	2	3	4	5	6	7	8	9
	1	1780	0	1	1	1	0	1	0	1	1
	2	1060	1	1	1	1	1	1	1	1	1
	3	930	0	0	0	0	1	0	1	1	0
	4	820	0	0	0	0	1	0	0	1	1
	5	665	0	0	0	1	0	0	0	1	0
	6	430	1	1	1	1	1	1	1	1	1
	7	265	1	1	1	1	1	1	1	1	1
	Total		3	4	4	5	5	4	4	7	5
SCoT 2	1	1370	0	0	0	0	0	0	1	0	0
	2	1270	0	0	0	1	0	1	0	1	1
	3	800	1	1	1	1	0	1	1	1	1
	4	710	1	1	1	1	0	1	1	1	1
	5	635	1	1	1	1	1	1	1	1	1
	6	530	0	1	1	1	1	1	1	1	0
	7	480	1	1	1	1	1	1	1	1	1
	8	370	1	1	1	1	1	1	1	1	1
	Total		5	6	6	7	4	7	7	7	6
SCoT 3	1	1340	0	0	0	1	1	0	0	1	0
	2	1280	0	0	0	0	0	0	0	1	0
	3	970	1	0	1	0	0	0	0	0	1
	4	760	1	0	1	0	0	0	0	0	1
	5	720	1	1	0	0	0	0	1	1	1
	6	600	0	0	0	1	0	1	0	0	0
	7	500	1	0	1	1	1	1	1	1	1
	8	460	1	1	1	1	1	1	1	1	1
	9	315	1	1	1	1	1	1	1	1	1
	10	270	1	1	0	1	1	1	1	0	1
	Total		7	4	5	6	5	5	5	6	7
SCoT 4	1	1340	0	1	1	1	1	1	1	1	1
	2	1165	0	0	0	0	0	0	1	1	0
	3	900	1	1	1	1	1	1	1	1	1
	4	780	0	0	1	0	0	0	0	1	0
	5	650	1	0	1	0	0	0	0	1	0
	6	500	1	1	1	1	0	0	1	1	1
	7	425	1	1	1	1	1	1	1	1	1
	8	345	1	1	1	1	1	1	1	1	1
	9	230	1	1	0	1	0	1	1	1	1
	Total		6	6	7	6	4	5	7	9	6

Table (S2). Cont.

SCoT 6	1	1215	1	0	1	1	0	1	0	1	0
	2	730	1	0	1	0	0	0	0	0	0
	3	600	1	1	1	1	0	0	0	0	1
	4	500	1	0	1	0	1	0	0	0	1
	5	440	1	1	1	1	1	1	1	1	1
	6	375	1	0	1	1	1	1	1	1	1
Total			6	2	6	4	3	3	2	2	4

Table (S3). Genetic similarity matrix based on ISSR analysis among three *Capparis spinosa* varieties estimated according to dice method. *Capparis spinosa* L. varieties; *canescens* (1), *deserti* (2), *inermis* (3).

	1	2	3	4	5	6	7	8	9
1	1								
2	0.18	1							
3	0.52	0.69	1						
4	0.37	0.16	0.49	1					
5	0.18	0.60	0.69	0.56	1				
6	0.23	0.42	0.36	0.39	0.23	1			
7	0.82	0.64	0.73	0.60	0.82	0.83	1		
8	0.81	0.60	0.89	0.76	1.00	0.94	0.65	1	
9	0.34	0.14	0.29	0.12	0.52	0.00	0.73	0.71	1

Table (S4). Genetic similarity matrix based on SCoT analysis among three *Capparis spinosa* varieties estimated according to dice method. *Capparis spinosa* L. varieties; *canescens* (1), *deserti* (2), *inermis* (3).

	1	2	3	4	5	6	7	8	9
1	1								
2	0.62	1							
3	0.23	0.62	1						
4	0.67	0.37	0.52	1					
5	1.00	0.90	0.91	0.77	1				
6	0.73	0.43	0.65	0.00	0.70	1			
7	0.65	0.32	0.83	0.56	0.60	0.46	1		
8	0.85	0.75	0.65	0.40	0.83	0.58	0.50	1	
9	0.23	0.37	0.44	0.44	0.77	0.50	0.56	0.65	1

Table (S5). Genetic similarity matrix based on ISSR and SCoT analysis combination among three *Capparis spinosa* varieties estimated according to dice method. *Capparis spinosa* L. varieties; *canescens* (1), *deserti* (2), *inermis* (3).

	1	2	3	4	5	6	7	8	9
1	1								
2	0.34	1							
3	0.24	0.69	1						
4	0.49	0.12	0.49	1					
5	0.66	0.79	0.87	0.68	1				
6	0.45	0.32	0.45	0.00	0.39	1			
7	0.75	0.39	0.84	0.54	0.72	0.49	1		
8	0.90	0.90	0.79	0.49	1.00	0.77	0.52	1	
9	0.12	0.10	0.25	0.16	0.65	0.10	0.63	0.68	1