Table S1. Activities of acid and alkaline phosphatase (acP and alP) and dehydrogenase (DH) in 0 to 20 cm soil depth of the six studied treatments (no P, TSP, ash, manure, compost and compost+TSP) with cultivation of selected accessions of alfalfa and red clover in autumn 2020. Letters in capital case indicate significant difference between treatments and letters in lower case indicate significant difference between accessions within same plant species (Duncan's new multiple range test with $p < 0.05$). Mean ± standard deviation (n = 4).

Enzyme	Plant species	Accession	Treatment					
			No P	TSP	Ash	Manure	Compost	Compost+TSP
alP	Alfalfa	LE2812	36.5 ± 21.7 Aa	31.9 ± 6.0 Aa	38.0 ± 10.5 Aa	53.0 ± 26.0 Aa	52.1 ± 10.6 Aa	45.0 ± 16.8 Aa
		LE2368	34.4 ± 16.4 ABa	32.5 ± 7.8 Ba	38.7 ± 7.0 ABa	49.1 ± 16.7 Aa	48.8 ± 6.5 Aa	46.3 ± 17.6 ABa
		LE888	32.3 ± 17.0 Ca	34.6 ± 8.6 BCa	36.7 ± 7.2 ABCa	46.8 ± 18.3 ABCa	52.1 ± 15.1 Aa	49.7 ± 10.7 ABa
		Average	34.4 ± 16.8 B	33.0 ± 6.9 B	37.8 ± 7.6 AB	49.3 ± 18.1 A	51.0 ± 10.3 A	47.0 ± 14.1 AB
	Red clover	LE1731	24.1 ± 12.4 Ba	28.5 ± 10.5 Bb	26.0 ± 14.0 Bb	50.4 ± 14.0 Aa	52.5 ± 9.9 Aa	44.7 ± 11.4 Aa
		LE1423	28.5 ± 11.2 Ca	36.5 ± 5.4 BCa	35.7 ± 8.9 BCa	45.4 ± 15.0 Ba	61.4 ± 14.2 Aa	61.6 ± 15.7 Aa
		LE1937	34.5 ± 19.8 Ba	33.6 ± 6.6 Bab	33.7 ± 10.5 Bab	45.1 ± 11.1 ABa	51.1 ± 12.0 Aa	49.5 ± 9.8 Aa
		Average	29.0 ± 14.2 B	32.9 ± 7.8 B	32.3 ± 10.7 B	46.9 ± 12.4 A	55.0 ± 12.0 A	51.9 ± 13.6 A
	Average		31.7 ± 15.5 D	33.0 ± 7.2 CD	35.2 ± 9.4 C	48.1 ± 15.1 B	53.0 ± 11.1 A	49.5 ± 13.8 AB
acP	Alfalfa	LE2812	131.4 ± 11.1 ABa	131.4 ± 21.3 ABa	119.5 ± 23.5 Ba	140.4 ± 19.2 Aa	147.0 ± 20.6 Aa	127.7 ± 30.7 ABa
		LE2368	130.2 ± 22.3 Aa	127.4 ± 15.2 Aa	128.4 ± 14.4 Aa	136.6 ± 23.6 Aa	143.6 ± 26.1 Aa	99.2 ± 18.8 Bb
		LE888	134.4 ± 22.1 Aa	126.1 ± 7.7 Aa	125.6 ± 12.1 Aa	141.5 ± 30.9 Aa	137.4 ± 16.1 Aa	130.1 ± 26.6 Aa
		Average	132.0 ± 17.5 AB	128.5 ± 14.9 AB	124.1 ± 16.3 AB	139.5 ± 22.7 AB	142.7 ± 19.7 A	120.8 ± 27.6 B
	Red clover	LE1731	132.9 ± 22.7 Aa	130.0 ± 21.9 Aa	118.0 ± 7.6 Aa	127.6 ± 10.7 Ab	136.3 ± 25.5 Aa	134.4 ± 27.2 Aab
		LE1423	133.1 ± 15.5 Aa	143.1 ± 30.4 Aa	132.6 ± 28.8 Aa	145.7 ± 20.5 Aa	132.3 ± 5.2 Aa	139.6 ± 36.4 Aa
		LE1937	127.9 ± 21.1 ABa	121.7 ± 25.4 ABa	113.2 ± 12.6 Ba	142.3 ± 25.5 Aab	128.7 ± 21.0 ABa	125.5 ± 25.9 ABb
		Average	131.3 ± 18.3 A	131.6 ± 25.3 A	121.3 ± 18.9 A	138.5 ± 19.8 A	132.4 ± 17.8 A	132.6 ± 26.9 A
	Average		131.6 ± 17.5 ABC	130.1 ± 20.6 BCD	122.6 ± 17.4 D	139.0 ± 20.8 A	137.6 ± 19.1 AB	126.7 ± 27.2 CD
DH	Alfalfa	LE2812	60.6 ± 25.2 Aa	46.8 ± 12.3 Aa	42.4 ± 7.1 Aa	76.8 ± 44.4 Aa	83.2 ± 24.0 Aa	53.5 ± 14.8 Aa
		LE2368	42.8 ± 21.7 Ba	44.9 ± 8.7 Ba	45.7 ± 18.1 ABa	71.5 ± 21.0 Aa	56.3 ± 19.4 ABa	65.2 ± 29.0 ABa
		LE888	55.8 ± 43.6 Aa	46.6 ± 20.8 Aa	55.5 ± 28.3 Aa	63.0 ± 25.9 Aa	71.3 ± 15.4 Aa	77.2 ± 31.8 Aa
		Average	53.1 ± 29.7 ABC	46.1 ± 13.4 C	48.4 ± 19.6 BC	69.9 ± 27.6 A	70.3 ± 21.4 A	65.3 ± 25.8 AB
	Red clover	LE1731	32.1 ± 11.3 Aa	54.7 ± 11.5 Aa	46.5 ± 26.3 Aa	67.9 ± 30.9 Aa	56.8 ± 21.1 Aa	70.2 ± 22.0 Aa
		LE1423	69.8 ± 23.7 Aa	54.3 ± 16.9 Aa	56.8 ± 15.7 Aa	52.1 ± 15.9 Aa	65.0 ± 43.1 Aa	64.8 ± 23.7 Aa
		LE1937	40.5 ± 10.1 BCa	37.3 ± 9.2 Ca	45.6 ± 11.3 BCa	68.5 ± 22.9 Aa	58.2 ± 18.5 ABa	56.6 ± 18.6 ABa
		Average	49.7 ± 23.4 A	48.8 ± 14.5 A	49.9 ± 16.7 A	62.8 ± 23.1 A	59.6 ± 24.9 A	63.8 ± 20.3 A
	Average		51.6 ± 26.5 B	47.4 ± 13.7 B	49.1 ± 17.8 B	66.2 ± 25.0 A	65.2 ± 23.3 A	64.6 ± 22.7 A

Table S2. Activities of acid and alkaline phosphatase (acP and alP) and dehydrogenase (DH) in 0 to 20 cm soil depth of the six studied treatments (no P, TSP, ash, manure, compost and compost+TSP) with cultivation of selected accessions of alfalfa and red clover in autumn 2021. Letters in capital case indicate significant difference between treatments and letters in lower case indicate significant difference between accessions within same plant species (Duncan's new multiple range test with $p < 0.05$). Mean ± standard deviation (n = 4).

Enzyme	Plant species	Accession	Treatment					
			No P	TSP	Ash	Manure	Compost	Compost+TSP
alP	Alfalfa	LE2812	39.1 ± 17.7 ABa	29.0 ± 9.9 Ba	36.1 ± 8.5 ABa	50.4 ± 9.0 Aa	43.0 ± 5.5 ABa	47.4 ± 14.9 Aa
		LE2368	29.3 ± 12.4 Ba	31.6 ± 6.0 ABa	40.0 ± 12.6 ABa	48.1 ± 25.3 Aa	38.7 ± 8.8 ABa	48.8 ± 9.6 Aa
		LE888	32.3 ± 12.9 BCa	29.0 ± 8.4 Ca	38.4 ± 6.0 ABCa	44.8 ± 13.0 ABa	43.9 ± 10.6 ABa	46.5 ± 8.6 Aa
		Average	33.6 ± 13.8 BC	29.9 ± 7.6 C	38.2 ± 8.7 ABC	47.8 ± 15.8 A	41.8 ± 8.1 AB	47.6 ± 10.4 A
	Red clover	LE1731	27.1 ± 11.5 Ca	29.1 ± 15.1 Ca	33.8 ± 13.2 BCa	38.9 ± 10.2 BCa	59.1 ± 11.8 Aa	48.1 ± 15.4 ABa
		LE1423	24.4 ± 4.9 Ba	26.7 ± 4.5 Ba	33.4 ± 8.6 Ba	48.9 ± 20.2 Aa	50.0 ± 16.0 Aa	51.2 ± 7.9 Aa
		LE1937	32.4 ± 16.9 ABa	31.4 ± 13.3 Ba	38.5 ± 18.5 ABa	40.9 ± 8.9 ABa	46.4 ± 15.6 ABa	48.5 ± 9.7 Aa
		Average	28.0 ± 11.5 C	29.1 ± 10.9 C	35.3 ± 12.9 BC	42.9 ± 13.5 AB	51.8 ± 14.4 A	49.3 ± 10.5 A
	Average		30.8 ± 12.8 C	29.5 ± 9.2 C	36.7 ± 10.9 B	45.3 ± 14.6 A	46.8 ± 12.5 A	48.5 ± 10.2 A
acP	Alfalfa	LE2812	108.7 ± 11.3 Aa	104.8 ± 10.7 Aa	93.5 ± 7.0 Aa	106.1 ± 18.1 Aa	105.6 ± 14.0 Aa	108.4 ± 24.1 Aa
		LE2368	104.6 ± 12.4 Aa	108.2 ± 4.2 Aa	105.6 ± 19.3 Aa	113.2 ± 15.1 Aa	106.5 ± 16.0 Aa	113.6 ± 22.5 Aa
		LE888	99.2 ± 14.6 Ba	110.1 ± 7.5 ABa	108.5 ± 11.2 ABa	112.8 ± 12.6 ABa	115.0 ± 11.1 ABa	117.6 ± 25.6 Aa
		Average	104.2 ± 12.3 A	107.7 ± 7.5 A	102.5 ± 14.0 A	110.7 ± 14.4 A	109.0 ± 13.3 A	113.2 ± 22.1 A
	Red clover	LE1731	121.8 ± 15.6 Aa	104.7 ± 21.9 Ab	105.7 ± 11.7 Aa	110.0 ± 22.7 Aa	115.8 ± 6.6 Aa	119.3 ± 19.1 Aa
		LE1423	123.4 ± 22.0 Aa	133.6 ± 8.9 Aa	97.4 ± 16.2 Ba	118.6 ± 20.6 ABa	112.0 ± 13.9 ABa	114.9 ± 30.7 ABa
		LE1937	99.5 ± 11.9 Ab	107.6 ± 18.6 Ab	107.1 ± 22.8 Aa	118.0 ± 14.3 Aa	104.3 ± 8.3 Aa	115.0 ± 22.1 Aa
		Average	114.9 ± 19.1 A	115.3 ± 20.8 A	103.4 ± 16.5 A	115.5 ± 18.1 A	110.7 ± 10.4 A	116.4 ± 22.2 A
	Average		109.5 ± 16.7 AB	111.5 ± 15.8 A	103.0 ± 14.9 B	113.1 ± 16.2 A	109.9 ± 11.7 AB	114.8 ± 21.8 A
DH	Alfalfa	LE2812	73.9 ± 12.7 Aa	42.5 ± 10.0 Ba	44.0 ± 8.9 Bb	71.3 ± 20.6 Aa	57.7 ± 21.6 ABa	55.8 ± 11.2 ABa
		LE2368	54.7 ± 20.8 Bab	58.8 ± 13.4 Ba	59.7 ± 4.9 Bba	65.9 ± 20.8 ABa	84.2 ± 18.7 Aa	52.2 ± 15.0 Ba
		LE888	39.1 ± 2.1 Cb	49.5 ± 11.3 BCa	69.7 ± 11.7 ABCa	61.8 ± 12.9 ABCa	86.7 ± 5.0 Aa	70.8 ± 33.5 ABa
		Average	54.3 ± 19.3 B	50.3 ± 12.6 B	57.7 ± 14.3 AB	66.7 ± 17.5 AB	74.3 ± 21.1 A	59.6 ± 21.7 AB
	Red clover	LE1731	66.5 ± 28.8 ABa	53.9 ± 16.2 Bab	56.5 ± 22.1 Ba	67.0 ± 21.2 ABa	95.5 ± 3.4 Aa	69.2 ± 8.7 ABa
		LE1423	56.6 ± 11.2 Aa	77.4 ± 32.1 Aa	42.2 ± 17.8 Aa	60.3 ± 20.3 Aa	70.7 ± 25.2 Aa	71.6 ± 14.1 Aa
		LE1937	41.7 ± 19.4 Ca	36.4 ± 9.3 Cb	48.8 ± 31.0 BAa	75.5 ± 28.9 ABa	74.3 ± 32.3 ABa	81.9 ± 26.4 Aa
		Average	54.8 ± 22.6 B	55.7 ± 24.9 B	48.5 ± 21.6 B	67.6 ± 22.5 AB	80.2 ± 24.3 A	74.7 ± 17.8 A
	Average		54.5 ± 20.5 B	52.7 ± 18.9 B	53.3 ± 18.3 B	67.2 ± 19.8 A	77.5 ± 22.6 A	66.8 ± 21.0 A