

Table S2. . Effects of the anthocyanins and melanins accumulation on morphological parameters of barley plants growing in field and plot assayed by Kruskal–Wallis H-test; degrees of freedom (df): 1. Each group includes 120 plants. * - significant p-value.

	Anthocyanins							
Trait	Field				Plot			
		sum of ranks	H	p-value		sum of ranks	H	p-value
Height of plant	no	13355	4,25047	0,0392*	no	12152,5	12,894	0,0003*
	yes	15565			yes	14875,5		
Number of spike per plant	no	15383	3,09263	0,0786	no	13243	2,1332	0,1441
	yes	13537			yes	13785		
Spike lengh	no	12951,5	9,45764	0,0021*	no	11169,5	33,4889	0,0000*
	yes	15968,5			yes	15858,5		
Density of spike	no	15754	6,71892	0,0095*	no	14155,5	0,14742	0,7010
	yes	13166			yes	12872,5		
Number of seeds per plant	no	14807,5	0,41776	0,5181	no	12817	5,18472	0,0228*
	yes	14112,5			yes	14211		
Mass of seeds per plant	no	15258,5	2,20682	0,1374	no	12848	4,91057	0,0267*
	yes	13661,5			yes	14180		
	Melanins							
Trait	Field				Plot			
		sum of ranks	H	p-value		sum of ranks	H	p-value
Height of plant	no	14502	0,27887	0,5974	no	14679,5	3,35415	0,0670
	yes	14418			yes	12348,5		
Number of spike per plant	no	13555	1,60097	0,2058	no	13112,5	1,57969	0,2088
	yes	15365			yes	13915,5		
Spike lengh	no	13943	0,31669	0,5736	no	14110,5	0,5597	0,4544
	yes	14977			yes	12917,5		
Density of spike	no	11295	34,3168	0,0000*	no	12536	7,01285	0,0081*

	yes	17625			yes	14492		
Number of seeds per plant	no	13330,5	2,73185	0,0984	no	13415	0,42214	0,5159
	yes	15589,5			yes	13613		
Mass of seeds per plant	no	12766,5	7,30415	0,0069*	no	13475	0,28326	0,5946
	yes	16153,5			yes	13553		