Table S1. Mean pairwise comparisons of growth trait interactions between accessions and plant treated by MOE. According to the Multiple Range Duncan's test at p ≤ 0.05, any mean values with a common letter are not considered significant.

Accession*Treatment	PH (cm)	LA (cm²)	TCC (SPAD)	Accession*Treatment	PH (cm)	LA (cm²)	TCC (SPAD)
AC1*WOM	51.27 a-x ± 0.18	14.26 b-i ± 0.65	14.17 f-s ± 2.68	AC30*WM	96.13 i-l ± 0.68	15.41 bc ± 0.41	18.97 cde ± 0.95
AC1*WM	53.07 a-x ± 0.47	14.58 b-g ± 1.22	16.17 c-l ± 0.32	AC31*WOM	91.67 r-aa ± 0.64	9.06 am-ax ± 0.27	13.10 h-w ± 1.06
AC2*WOM	69.53 at-au ± 0.58	9.52 af-au ± 0.53	14.87 e-q ± 2.28	AC31*WM	86.60 ag-am ± 0.70	14.05 b-j ± 0.58	16.23 c-k ± 0.46
AC2*WM	87.67 ad-al ± 0.52	12.05 k-aa ± 0.23	16.07 c-m ± 1.94	AC32*WOM	93.40 k-v ± 0.70	8.96 an-ax ± 0.50	10.30 o-ah ± 1.76
AC3*WOM	69.07 au-av ± 0.29	11.11 u-ai ± 0.32	8.67 u-ai ± 0.29	AC32*WM	94.87 j-r ± 0.24	12.10 k-aa ± 0.30	13.93 f-s ± 1.24
AC3*WM	80.73 ao-ap ± 0.24	11.19 t-ai ± 0.60	12.50 i-y ± 1.66	AC33*WOM	93.60 k-v ± 0.46	9.08 al-ax ± 0.03	7.60 y-ai ± 1.02
AC4*WOM	73.80 as-at ± 0.12	10.55 z-ap ± 0.46	10.80 n-ah ± 1.36	AC33*WM	94.67 j-r ± 0.53	10.78 x-an ± 0.49	9.63 r-ai ± 1.14
AC4*WM	88.80 z-ai ± 0.31	13.75 b-k ± 0.55	10.00 p-ah ± 0.35	AC34*WOM	91.67 r-aa ± 0.44	9.01 an-ax ± 0.23	10.40 o-ah ± 0.57
AC5*WOM	60.53 a-w ± 0.29	11.57 n-ac ± 0.68	8.53 v-ai ± 1.78	AC34*WM	100.80 fgh ± 0.69	11.03 u-ak ± 0.65	7.37 z-ai ± 0.71
AC5*WM	71.27 at-au ± 0.33	12.80 g-w ± 0.52	12.97 h-w ± 3.18	AC35*WOM	86.87 ag-al ± 1.62	7.64 av-ay ± 0.44	18.27 c-g ± 1.56
AC6*WOM	52.47 a-x ± 0.18	11.34 r-ag ± 0.56	14.93 e-p ± 1.74	AC35*WM	94.53 j-s ± 0.07	13.17 e-r ± 0.46	17.33 c-i ± 1.19
AC6*WM	73.40 as-at ± 0.40	13.27 e-p ± 0.28	12.03 j-aa ± 2.20	AC36*WOM	87.00 af-al ± 0.95	4.85 a-z ± 0.23	8.73 u-ai ± 1.42
AC7*WOM	84.93 ak-an ± 0.44	14.62 b-g ± 1.01	15.17 e-o ± 0.74	AC36*WM	88.13 ac-ak ± 0.77	8.97 an-ax ± 0.27	9.77 r-ai ± 0.35
AC7*WM	102.40 def ± 1.20	15.53 b ± 0.02	11.03 n-af ± 1.05	AC37*WOM	90.47 v-ae ± 0.44	8.29 ar-ay ± 0.41	6.00 ag-ai ± 0.46
AC8*WOM	67.93 a-v ± 0.18	11.36 r-af ± 0.22	10.57 o-ah ± 0.89	AC37*WM	88.53 aa-ai ± 0.35	8.47 aq-ay ± 0.44	11.27 l-ae ± 1.26
AC8*WM	67.73 a-v ± 0.58	14.42 b-h ± 0.31	14.33 e-r ± 0.52	AC38*WOM	96.53 ijk ± 0.47	9.93 ab-as ± 0.22	6.07 af-ai ± 0.22
AC9*WOM	84.80 al-an ± 0.31	9.45 ag-av ± 0.47	10.30 o-ah ± 0.97	AC38*WM	89.53 y-ah ± 1.05	12.16 k-z ± 0.74	8.73 u-ai ± 0.64
AC9*WM	92.00 p-z ± 0.35	12.35 j-z ± 0.36	13.73 g-t ± 1.44	AC39*WOM	86.40 ah-am ± 0.81	11.23 s-ah ± 0.10	6.47 ad-ai ± 0.22
AC10*WOM	71.40 at-au ± 0.31	10.92 w-am ± 0.72	10.40 o-ah ± 1.02	AC39*WM	73.53 as-at ± 0.64	13.37 d-n ± 0.03	26.00 a ± 1.89
AC10*WM	89.13 z-ai ± 0.18	12.62 h-x ± 0.65	12.03 j-aa ± 0.44	AC40*WOM	90.53 v-ad ± 0.41	9.64 ad-au ± 0.75	11.27 l-ae ± 1.81
AC11*WOM	75.47 ar-as ± 0.18	14.92 b-e ± 0.68	13.03 h-w ± 0.93	AC40*WM	87.93 ad-al ± 0.55	9.53 af-au ± 0.29	12.83 h-w ± 2.03
AC11*WM	102.80 def ± 0.50	17.43 a ± 0.61	10.77 n-ah ± 1.99	AC41*WOM	76.40 aq-as ± 0.76	13.64 c-l ± 0.53	10.83 n-ah ± 1.13
AC12*WOM	86.47 ag-am ± 0.73	10.67 y-ao ± 0.30	11.13 m-ae ± 1.44	AC41*WM	69.07 au-av ± 1.09	13.58 d-m ± 0.23	13.23 h-v ± 0.62
AC12*WM	92.73 n-x ± 0.29	9.61 ad-au ± 0.15	11.53 k-ac ± 0.75	AC42*WOM	78.53 ap-aq ± 0.18	11.79 l-ab ± 0.17	9.43 r-ai ± 0.84
AC13*WOM	92.40 o-y ± 0.50	11.09 u-aj ± 0.77	12.73 h-w ± 0.41	AC42*WM	70.27 au-av ± 2.21	13.88 b-k ± 0.27	8.50 v-ai ± 0.47
AC13*WM	92.87 m-w ± 0.41	10.62 z-ao ± 0.42	9.53 r-ai ± 1.10	AC43*WOM	85.27 aj-an ± 0.84	9.19 ak-ax ± 0.21	16.17 c-l ± 4.89
AC14*WOM	91.80 q-z ± 0.90	9.98 ab-as ± 0.33	14.00 f-s ± 1.63	AC43*WM	93.87 j-u ± 0.13	9.96 ab-as ± 0.68	23.43 ab ± 0.78
AC14*WM	94.00 j-u ± 0.35	12.53 i-y ± 0.64	11.87 j-ab ± 0.97	AC44*WOM	87.07 af-al ± 1.12	7.93 at-ay ± 0.27	10.10 p-ah ± 2.29
AC15*WOM	94.73 j-r ± 0.66	13.32 d-o ± 0.60	11.20 m-ae ± 0.99	AC44*WM	95.20 j-p ± 0.12	8.74 ap-ay ± 0.17	11.23 l-ae ± 1.09
AC15*WM	102.13 ef ± 0.35	17.41 a ± 0.42	11.10 n-ae ± 1.29	AC45*WOM	91.27 t-ac ± 1.17	9.22 aj-aw ± 0.50	7.70 x-ai ± 1.07

	PH	LA	TCC		PH	LA	TCC
AC16*WOM	94.93 j-q ± 1.37	12.52 i-y ± 0.55	16.57 c-j ± 0.27	AC45*WM	98.60 hi ± 0.46	9.36 ah-av ± 0.29	11.03 n-af ± 2.02
AC16*WM	105.27 d ± 0.66	17.31 a ± 0.46	9.17 s-ai ± 0.15	AC46*WOM	87.27 ae-al ± 0.67	9.56 ae-au ± 0.25	9.20 s-ai ± 1.17
AC17*WOM	94.60 j-s ± 0.42	9.75 ac-at ± 0.46	13.13 h-v ± 0.26	AC46*WM	78.40 ap-aq ± 0.58	12.76 g-w ± 0.66	12.60 i-x ± 0.36
AC17*WM	96.93 ij ± 0.29	12.82 g-v ± 1.38	17.60 c-h ± 2.53	AC47*WOM	83.73 am-an ± 0.87	8.28 ar-ay ± 0.18	7.00 ab-ai ± 0.21
AC18*WOM	77.20 aq-ar ± 0.64	10.80 y-ao ± 0.30	8.50 v-ai ± 1.31	AC47*WM	93.27 l-w ± 0.18	12.22 j-z ± 0.27	8.70 u-ai ± 1.11
AC18*WM	93.33 k-w ± 0.57	11.05 u-ak ± 0.48	6.43 ad-ai ± 0.63	AC48*WOM	86.13 ai-am ± 0.47	10.95 v-al ± 0.59	7.30 z-ai ± 0.55
AC19*WOM	73.60 as-at ± 0.23	13.03 f-t ± 0.05	11.10 n-ae ± 0.62	AC48*WM	98.87 ghi ± 1.19	13.31 d-o ± 0.83	9.93 q-ai ± 0.44
AC19*WM	75.20 ar-as ± 0.35	15.14 bcd ± 0.57	9.43 r-ai ± 0.67	AC49*WOM	88.20 ac-aj ± 3.20	11.45 o-ae ± 0.33	6.10 af-ai ± 0.12
AC20*WOM	76.20 aq-as ± 0.72	9.60 ad-au ± 0.67	5.07 a-i ± 0.18	AC49*WM	96.13 ijk ± 0.18	10.83 x-an ± 0.41	11.17 m-ae ± 1.17
AC20*WM	73.80 as-at ± 0.31	11.41 p-af ± 0.52	10.17 p-ah ± 0.82	AC50*WOM	95.93 i-n ± 0.57	8.06 at-ay ± 1.14	11.87 j-ab ± 0.92
AC21*WOM	95.40 j-o ± 0.31	11.39 q-af ± 0.58	14.00 f-s ± 0.46	AC50*WM	102.93 def ± 0.07	10.09 ab-ar ± 1.00	12.40 j-y ± 1.53
AC21*WM	109.80 c ± 0.53	13.89 b-k ± 0.50	12.23 j-z ± 0.23	AC51*WOM	104.87 de ± 0.98	18.48 a ± 0.76	13.80 g-t ± 2.51
AC22*WOM	85.13 aj-an ± 0.48	10.84 x-an ± 0.13	13.67 g-u ± 1.19	AC51*WM	89.53 y-ah ± 0.37	14.75 b-f ± 0.50	14.43 e-r ± 0.90
AC22*WM	88.07 ac-ak ± 0.29	12.88 f-u ± 0.60	11.70 j-ab ± 1.80	AC52*WOM	93.60 k-v ± 0.61	11.09 u-aj ± 0.37	10.37 o-ah ± 0.84
AC23*WOM	74.53 ar-as ± 1.57	7.78 au-ay ± 0.19	6.30 ae-ai ± 0.26	AC52*WM	90.87 u-ad ± 0.64	11.24 s-ah ± 0.94	13.77 g-t ± 0.26
AC23*WM	90.20 w-af ± 0.12	8.66 aq-ay ± 0.29	8.90 t-ai ± 0.55	AC53*WOM	85.13 aj-an ± 0.87	11.75 m-ab ± 0.41	11.30 k-ad ± 0.76
AC24*WOM	96.13 i-l ± 0.07	7.49 aw-ay ± 0.58	5.93 ah-ai ± 0.96	AC53*WM	86.93 ag-al ± 0.55	9.32 ai-aw ± 0.30	6.40 ad-ai ± 0.44
AC24*WM	94.73 j-r ± 0.13	8.12 as-ay ± 0.41	8.10 w-ai ± 2.06	AC54*WOM	88.33 ab-aj ± 0.87	7.37 ax-ay ± 0.42	8.47 v-ai ± 0.15
AC25*WOM	101.47 fg ± 0.97	10.24 aa-aq ± 0.90	9.20 s-ai ± 1.25	AC54*WM	89.47 y-ah ± 0.52	7.80 au-ay ± 0.02	8.73 u-ai ± 0.44
AC25*WM	98.53 hi ± 0.47	13.56 d-m ± 0.73	13.67 g-u ± 1.00	AC55*WOM	104.53 de ± 0.58	9.97 ab-as ± 0.60	16.53 c-j ± 0.69
AC26*WOM	89.53 y-ah ± 0.47	6.97 a-y ± 0.23	7.10 aa-ai ± 0.12	AC55*WM	103.53 def ± 0.13	8.81 ao-ax ± 0.40	15.67 d-n ± 0.96
AC26*WM	83.60 am-an ± 0.46	12.87 g-u ± 0.18	12.43 i-y ± 0.64	AC56*WOM	110.27 c ± 0.48	13.27 e-p ± 0.62	17.60 c-h ± 2.12
AC27*WOM	82.93 an-ao ± 0.07	10.03 ab-ar ± 0.63	6.63 ac-ai ± 0.78	AC56*WM	108.33 c ± 0.47	13.39 d-n ± 0.29	11.47 k-ac ± 0.57
AC27*WM	95.47 j-o ± 0.29	11.54 n-ac ± 0.88	6.70 ac-ai ± 0.55	AC57*WOM	103.07 def ± 6.73	13.84 b-k ± 0.80	13.87 f-t ± 1.98
AC28*WOM	91.40 s-ab ± 0.83	8.50 aq-ay ± 0.47	19.97 bcd ± 4.07	AC57*WM	117.00 a ± 1.11	14.07 b-j ± 0.16	10.97 n-af ± 1.38
AC28*WM	103.20 def ± 0.46	15.51 b ± 0.45	20.57 bc ± 0.43	AC58*WOM	94.53 j-s ± 1.30	13.25 e-q ± 0.08	10.87 n-ah ± 1.00
AC29*WOM	89.67 x-ag ± 0.44	12.02 k-aa ± 0.44	10.23 o-ah ± 1.89	AC58*WM	86.40 ah-am ± 1.20	13.82 b-k ± 0.80	8.70 u-ai ± 0.35
AC29*WM	113.53 b ± 0.18	11.45 o-ad ± 0.85	10.83 n-ah ± 1.19	AC59*WOM	96.07 i-m ± 0.77	13.09 e-s ± 0.27	12.63 i-x ± 0.67
AC30*WOM	94.20 j-t ± 0.72	11.22 s-ah ± 0.50	18.60 c-f ± 2.84	AC59*WM	89.67 x-ag ± 0.13	13.08 e-s ± 0.06	12.50 i-y ± 0.71

PH: plant height, LA: leaf area, TCC: total chlorophyll content, WOM: control (without application of morginga organ extract), WM: with application of moringa organ extract. Any values of means with the same letter in the same column are not significant according to the Multiple Rang Duncan's test at p ≤ 0.05.

Table S2. Mean pairwise comparisons of the interaction between 59 barley accessions and foliar MOE application with yield contributing traits, based on the Multiple Range Duncan's test at p ≤ 0.05. Any values of means holding common letter are not significant.

Accessions*Treatments	TNP	SNP	SL (cm)	AL (cm)	SW (g)	SNS	SWS (g)	1000 KW (g)	TY (g)	STW (g)
AC1*WOM	7.67 y-af ± 0.33	5.33 aa-ae ± 0.88	4.24 aq-ax ± 0.39	10.81 y-an ± 0.39	1.76 uvw ± 0.08	34.56 a-e ± 0.39	2.43 g-l ± 0.04	51.00 l-r ± 1.46	32.55 al-ao ± 2.71	133.74 au-av ± 0.90
AC1*WM	7.67 y-af ± 0.67	6.00 z-ae ± 0.58	4.59 al-ax ± 0.14	10.90 x-al ± 0.13	2.11 j-m ± 0.09	42.00 wx ± 0.28	2.77 de ± 0.02	50.20 m-z ± 0.18	58.92 ab-ao ± 9.07	186.77 ar-as ± 3.02
AC2*WOM	6.67 ab-af ± 0.33	5.00 ab-ae ± 0.58	7.36 d-n ± 0.30	11.55 n-ac ± 0.23	1.70 wx ± 0.08	28.22 a-l ± 0.39	1.92 t-ab ± 0.04	60.23 bc ± 1.88	59.44 aa-ao ± 6.70	217.95 a-q ± 2.23
AC2*WM	7.00 aa-af ± 0.58	7.00 w-ae ± 0.58	6.34 m-ac ± 0.13	13.69 d-i ± 0.26	2.91 b ± 0.09	53.44 g ± 0.28	3.57 b ± 0.02	54.36 e-l ± 0.12	85.84 t-ao ± 4.61	247.46 a-p ± 1.54
AC3*WOM	7.33 z-af ± 0.67	5.00 ab-ae ± 0.58	3.81 a-x ± 0.01	12.37 j-t ± 0.57	1.89 qrs ± 0.08	44.11 rst ± 0.39	2.27 j-q ± 0.04	43.52 af-ar ± 1.09	17.13 am-ao ± 0.84	99.41 a-x ± 0.28
AC3*WM	5.00 a-f ± 1.00	3.00 a-e ± 0.00	3.78 a-x ± 0.15	12.49 h-q ± 0.84	1.80 s-v ± 0.09	41.33 xy ± 0.28	1.82 w-ae ± 0.02	42.82 aj-a ± 0.22	14.54 an-ao ± 2.96	45.62 a-y ± 0.99
AC4*WOM	8.67 x-af ± 0.88	5.00 ab-ae ± 0.58	6.13 o-ag ± 0.55	10.63 a-ap ± 0.12	2.18 hij ± 0.08	50.44 ijk ± 0.39	2.75 def ± 0.04	45.37 aa-ap ± 0.96	42.83 ag-ao ± 8.83	178.70 a-s ± 2.94
AC4*WM	10.33 u-af ± 2.03	8.33 ab-ae ± 2.03	6.30 m-ac ± 0.40	13.75 c-h ± 0.26	2.42 e ± 0.09	53.33 g ± 0.28	2.92 cd ± 0.02	43.22 ag-at ± 0.16	69.10 y-ao ± 5.55	204.40 aq-ar ± 1.85
AC5*WOM	6.33 ac-af ± 0.33	4.00 ad-ae ± 0.58	3.94 a-x ± 0.29	12.89 f-m ± 0.75	1.32 ah-aj ± 0.08	28.00 a-l ± 0.39	2.03 q-x ± 0.04	47.08 s-af ± 1.76	12.24 a-o ± 0.66	115.25 av-ax ± 0.22
AC5*WM	7.67 y-af ± 1.33	6.33 y-ae ± 1.20	5.43 y-ap ± 0.13	13.38 e-k ± 0.62	1.91 pqr ± 0.09	44.11 rst ± 0.28	2.32 i-o ± 0.02	43.18 ag-au ± 0.20	42.35 ah-ao ± 2.71	157.81 a-t ± 0.90
AC6*WOM	6.67 ab-af ± 0.88	4.00 ad-ae ± 0.58	4.52 am-ax ± 0.22	12.26 j-w ± 0.10	1.60 yz ± 0.08	35.22 ad-ae ± 0.39	1.87 v-ad ± 0.04	45.29 aa-ap ± 1.38	44.06 af-ao ± 5.51	133.74 au-av ± 1.84
AC6*WM	8.33 x-af ± 0.88	6.67 x-ae ± 0.88	5.27 ab-as ± 0.14	14.01 b-f ± 1.16	1.69 wx ± 0.09	44.89 qr ± 0.28	2.07 o-x ± 0.02	37.59 ay-bc ± 0.23	31.30 aj-ao ± 7.60	121.74 av-aw ± 2.53
AC7*WOM	5.33 ae-af ± 1.45	4.00 ad-ae ± 1.00	4.91 al-ax ± 0.74	9.34 ap-av ± 0.06	1.43 ac-ae ± 0.08	39.33 aaa-b ± 0.39	1.72 z-ah ± 0.04	36.90 ba-bd ± 1.18	42.52 ah-ao ± 5.92	153.37 at-au ± 1.97
AC7*WM	6.00 ad-af ± 0.58	4.67 ac-ae ± 0.33	6.47 k-aa ± 0.41	11.05 u-ai ± 0.24	1.64 xy ± 0.09	44.44 qrs ± 0.28	2.13 m-v ± 0.02	36.28 bb-bd ± 0.24	18.20 al-ao ± 2.29	102.23 aw-ax ± 0.76
AC8*WOM	7.33 z-af ± 0.88	4.67 ac-ae ± 0.88	4.44 ao-ax ± 0.11	11.36 p-ag ± 0.18	1.59 yz ± 0.08	34.33 a-e ± 0.39	1.81 w-ae ± 0.04	46.45 x-al ± 1.43	61.29 z-ao ± 12.62	181.25 a-s ± 4.21
AC8*WM	15.33 m-z ± 2.03	13.67 h-v ± 1.67	5.12 af-av ± 0.17	13.38 e-k ± 0.57	1.75 uvw ± 0.09	43.44 tuv ± 0.28	2.05 p-x ± 0.02	40.35 ar-ba ± 0.22	111.22 p-ah ± 12.05	280.27 an-ao ± 4.02
AC9*WOM	8.33 x-af ± 1.45	6.00 z-ae ± 1.53	4.03 at-ax ± 0.08	12.29 j-v ± 0.25	1.97 opq ± 0.08	46.00 op ± 0.39	2.33 i-o ± 0.04	42.95 ah-a ± 1.05	103.61 q-ak ± 14.42	255.60 a-p ± 4.81
AC9*WM	11.67 r-af ± 1.86	9.67 s-ad ± 2.03	4.49 an-ax ± 0.14	11.92 l-ab ± 0.49	2.18 hij ± 0.09	50.67 ij ± 0.28	2.51 e-j ± 0.02	42.72 ak-aw ± 0.18	132.48 j-ab ± 4.63	329.02 ai-aj ± 1.54
AC10*WOM	11.33 s-af ± 0.67	7.67 v-ae ± 0.88	5.09 ag-av ± 0.35	11.17 r-ah ± 0.01	1.71 wx ± 0.08	35.67 ad ± 0.39	2.08 o-w ± 0.04	50.53 m-u ± 1.39	62.70 z-ao ± 17.44	206.04 aq-ar ± 5.81
AC10*WM	10.00 v-af ± 1.53	8.00 u-ae ± 1.00	6.61 i-x ± 0.60	10.87 x-am ± 0.04	2.59 d ± 0.09	51.22 hi ± 0.28	3.06 c ± 0.02	47.82 r-ae ± 0.14	96.95 r-ak ± 3.19	286.90 am-ao ± 1.06
AC11*WOM	8.00 y-af ± 2.08	4.67 ac-ae ± 1.20	4.68 ak-ax ± 0.15	11.91 l-ab ± 0.40	1.89 qrs ± 0.08	36.89 abc ± 0.39	2.31 i-p ± 0.04	51.17 k-r ± 1.37	66.30 z-ao ± 8.00	191.31 ar-as ± 2.67
AC11*WM	11.67 r-af ± 2.03	10.00 r-ad ± 1.53	5.12 af-av ± 0.28	13.44 d-j ± 0.29	1.78 uvw ± 0.09	40.00 z-aa ± 0.28	2.13 m-v ± 0.02	44.49 ad-aq ± 0.22	128.23 l-ad ± 31.97	357.46 ag-ah ± 10.66
AC12*WOM	9.67 w-af ± 0.33	7.67 v-ae ± 0.88	4.83 aj-ax ± 0.26	11.51 n-ad ± 0.24	1.71 wx ± 0.08	35.56 a-d ± 0.39	2.25 j-r ± 0.04	48.04 r-ae ± 1.39	18.13 al-ao ± 1.88	97.44 a-x ± 0.63
AC12*WM	12.33 p-af ± 1.76	9.00 t-ae ± 1.15	5.43 y-ap ± 0.33	10.71 aa-ao ± 0.32	1.86 rst ± 0.09	46.56 no ± 0.28	2.16 l-u ± 0.02	39.88 ar-bb ± 0.21	41.19 ah-ao ± 7.50	155.04 a-t ± 2.50
AC13*WOM	8.00 y-af ± 0.58	7.00 w-ae ± 0.00	4.59 al-ax ± 0.13	13.01 f-m ± 0.13	2.59 d ± 0.08	51.89 h ± 0.39	3.41 b ± 0.04	49.97 n-x ± 0.97	199.49 d-l ± 46.43	466.49 r-v ± 15.48
AC13*WM	16.33 l-x ± 2.73	14.00 g-v ± 2.08	4.86 aj-ax ± 0.10	11.54 n-ac ± 0.45	2.67 c ± 0.09	57.78 d ± 0.28	3.13 c ± 0.02	46.26 x-al ± 0.14	198.28 d-l ± 8.69	439.11 w-aa ± 2.90
AC14*WOM	11.00 t-af ± 2.08	9.00 t-ae ± 2.65	4.85 aj-ax ± 0.18	12.09 k-z ± 0.13	2.13 jkl ± 0.08	38.56 ab ± 0.39	2.43 g-l ± 0.04	55.13 e-i ± 1.34	137.27 i-z ± 17.78	404.59 ac-ae ± 5.93
AC14*WM	11.67 r-af ± 1.20	7.67 v-ae ± 0.67	4.96 ah-aw ± 0.15	12.78 f-n ± 0.17	2.29 fg ± 0.09	53.56 g ± 0.28	2.57 e-i ± 0.02	42.78 aj-a ± 0.17	129.33 k-ac ± 5.10	417.34 aa-ad ± 1.70
AC15*WOM	15.00 m-aa ± 1.53	12.33 k-z ± 0.88	6.41 l-ab ± 0.18	12.26 j-w ± 0.27	2.10 j-m ± 0.08	43.56 s-v ± 0.39	2.77 de ± 0.04	48.20 r-ad ± 1.14	98.00 r-ak ± 19.39	284.82 am-ao ± 6.46
AC15*WM	13.67 o-ad ± 2.33	11.00 o-ac ± 2.08	4.17 as-ax ± 0.09	15.94 a ± 0.63	1.82 r-u ± 0.09	44.44 qrs ± 0.28	2.04 q-x ± 0.02	41.02 aq-az ± 0.21	161.10 f-t ± 11.09	450.77 u-x ± 3.70

AC16*WOM	12.00 q-af ± 1.53	11.33 n-ab ± 1.20	5.36 aa-ar ± 0.38	13.13 e-l ± 0.06	2.18 hij ± 0.08	48.78 lm ± 0.39	2.51 f-j ± 0.04	44.71 ab-aq ± 1.00	203.04 d-k ± 39.19	480.40 n-t ± 13.06
AC16*WM	13.33 o-ae ± 2.33	11.33 n-ab ± 2.33	6.04 p-ai ± 0.12	14.61 bcd ± 0.29	2.05 l-o ± 0.09	47.22 n ± 0.28	2.39 g-m ± 0.02	43.37 af-as ± 0.19	204.33 d-j ± 23.30	488.25 n-r ± 7.77
AC17*WOM	14.00 n-ad ± 0.58	11.67 o-ab ± 0.88	4.16 as-ax ± 0.21	11.99 l-aa ± 0.27	2.23 f-i ± 0.08	46.56 no ± 0.39	2.39 g-m ± 0.04	47.81 r-ae ± 1.06	193.78 d-m ± 16.33	446.79 v-y ± 5.44
AC17*WM	21.33 f-o ± 1.45	19.00 a-j ± 1.53	5.14 ae-au ± 0.11	11.41 o-af ± 0.17	1.86 rst ± 0.09	42.00 wx ± 0.28	2.60 e-h ± 0.02	44.20 ae-aq ± 0.21	225.27 c-e ± 60.65	483.06 n-s ± 20.22
AC18*WOM	13.33 o-ad ± 1.20	9.67 a-n ± 0.33	3.98 ao-ax ± 0.30	9.67 ap-av ± 0.15	1.58 y-aa ± 0.08	46.56 no ± 0.39	1.75 y-af ± 0.04	43.40 af-as ± 0.98	30.05 ak-ao ± 1.95	131.42 a-v ± 0.65
AC18*WM	19.33 i-s ± 1.86	11.33 n-ab ± 0.88	4.38 ap-ax ± 0.09	9.40 ap-av ± 0.41	2.12 jkl ± 0.09	48.78 lm ± 0.28	2.45 g-k ± 0.02	33.84 bcd ± 0.18	72.39 x-ao ± 12.37	323.52 ai-ak ± 4.12
AC19*WOM	11.67 r-af ± 3.71	10.67 p-ac ± 3.18	4.71 ak-ax ± 0.10	10.79 z-an ± 0.16	1.96 opq ± 0.08	50.89 ij ± 0.39	2.21 k-s ± 0.04	38.61 ax-bc ± 0.92	93.13 r-al ± 6.03	277.95 an-ao ± 2.01
AC19*WM	14.33 n-ac ± 2.96	9.00 t-ae ± 1.53	4.46 an-ax ± 0.35	11.19 q-ah ± 0.24	1.99 nop ± 0.09	56.00 e ± 0.28	2.18 k-t ± 0.02	35.51 bc-bd ± 0.19	95.55 r-ak ± 15.42	323.58 ai-ak ± 5.14
AC20*WOM	13.67 o-ad ± 3.53	9.00 t-ae ± 1.53	6.98 f-r ± 0.32	11.44 o-ae ± 0.35	1.10 ap-aq ± 0.08	23.89 ao-at ± 0.39	1.29 an-at ± 0.04	46.18 x-al ± 2.05	101.21 r-ak ± 13.95	309.99 aj-al ± 4.65
AC20*WM	19.67 i-r ± 2.73	16.00 e-s ± 1.53	6.28 m-ae ± 0.11	12.17 j-x ± 0.38	1.05 aq-ar ± 0.09	22.89 at-av ± 0.28	1.27 ao-at ± 0.02	45.66 aa-ao ± 0.37	106.81 q-aj ± 20.49	310.74 aj-al ± 6.83
AC21*WOM	8.67 x-af ± 2.19	8.33 u-ae ± 2.40	7.95 a-g ± 0.20	15.02 ab ± 0.22	2.94 b ± 0.08	61.67 b ± 0.39	3.35 b ± 0.04	47.71 r-ae ± 0.80	183.97 d-p ± 25.38	444.78 v-z ± 8.46
AC21*WM	14.67 n-ab ± 0.88	13.33 h-w ± 1.67	7.07 f-p ± 0.22	13.95 b-g ± 0.17	2.48 e ± 0.09	52.00 h ± 0.28	3.11 c ± 0.02	47.63 r-ae ± 0.15	220.67 d-g ± 37.91	515.06 jkl ± 12.64
AC22*WOM	11.33 s-af ± 0.33	8.00 u-ae ± 0.58	4.17 as-ax ± 0.15	12.09 k-z ± 0.20	1.82 r-u ± 0.08	39.33 aaa-b ± 0.39	2.04 q-x ± 0.04	47.71 r-ae ± 1.25	149.82 g-w ± 10.28	369.13 af-ag ± 3.43
AC22*WM	12.00 q-af ± 1.53	9.67 s-ad ± 1.67	4.01 au-ax ± 0.08	12.31 j-v ± 0.28	2.06 k-n ± 0.09	43.11 uv ± 0.28	2.35 h-n ± 0.02	46.33 w-al ± 0.18	131.85 j-ab ± 24.44	384.57 ae-af ± 8.15
AC23*WOM	17.67 k-w ± 2.03	13.67 h-v ± 2.03	7.73 b-i ± 0.29	9.21 aq-av ± 0.16	1.20 al-ao ± 0.08	20.06 bc-be ± 1.16	1.38 ak-ar ± 0.04	60.39 b ± 5.07	120.01 m-ae ± 1.98	435.21 x-ab ± 0.66
AC23*WM	18.67 j-t ± 1.45	12.67 j-y ± 1.86	6.83 h-u ± 0.32	9.46 ao-av ± 0.14	0.85 av-aw ± 0.09	19.89 bd-be ± 0.28	1.29 an-at ± 0.02	42.88 ai-a ± 0.46	52.91 ad-ao ± 3.62	285.07 am-ao ± 1.21
AC24*WOM	14.67 n-ab ± 3.38	11.67 m-aa ± 1.86	7.11 f-p ± 0.15	9.40 ap-av ± 0.06	1.18 an-ap ± 0.08	24.00 ao-as ± 0.39	1.33 an-ar ± 0.04	49.12 o-aa ± 2.07	54.47 ac-ao ± 6.82	207.59 aq-ar ± 2.27
AC24*WM	17.67 k-w ± 1.20	13.67 h-v ± 0.67	6.21 o-ag ± 0.12	10.45 ac-aq ± 0.27	1.16 an-ap ± 0.09	23.67 ap-au ± 0.28	1.35 am-ar ± 0.02	48.80 p-aa ± 0.33	154.07 f-v ± 12.22	420.02 aa-ad ± 4.07
AC25*WOM	23.67 e-l ± 1.20	18.33 c-l ± 1.86	6.78 i-v ± 0.10	12.11 k-y ± 0.20	1.31 ah-ak ± 0.08	21.78 aw-az ± 0.39	1.66 ab-aj ± 0.04	67.12 a ± 2.43	220.47 d-g ± 46.29	688.13 c ± 15.43
AC25*WM	18.00 j-v ± 3.46	13.67 h-v ± 2.85	7.92 a-h ± 0.38	15.76 a ± 0.59	1.57 y-aa ± 0.09	23.33 aq-au ± 0.28	1.94 t-aa ± 0.02	60.21 bc ± 0.21	238.10 cde ± 7.70	764.32 a ± 1.57
AC26*WOM	21.33 f-o ± 1.20	16.33 e-r ± 0.33	6.78 i-v ± 0.11	9.97 ah-au ± 0.18	1.03 aq-as ± 0.08	23.78 ap-at ± 0.39	1.16 aq-av ± 0.04	44.72 ab-aq ± 2.03	112.79 p-ah ± 9.01	345.72 ah-ai ± 3.00
AC26*WM	18.33 j-u ± 1.76	11.33 n-ab ± 2.03	6.09 o-ah ± 0.24	11.89 l-ab ± 0.85	1.05 aq-ar ± 0.09	23.56 ap-au ± 0.28	1.14 ar-av ± 0.02	43.36 af-as ± 0.37	145.74 h-x ± 11.95	408.95 ac-ad ± 3.98
AC27*WOM	28.67 a-h ± 4.91	21.67 a-e ± 3.71	6.07 o-ah ± 0.33	12.10 k-z ± 0.37	1.17 an-ap ± 0.08	23.00 as-av ± 0.39	1.36 al-ar ± 0.04	53.79 f-m ± 2.19	127.47 l-ad ± 3.99	326.51 ai-ak ± 1.33
AC27*WM	21.00 f-o ± 1.53	13.67 h-v ± 0.67	6.62 i-x ± 0.12	11.23 p-ah ± 0.57	1.24 ai-an ± 0.09	23.11 ar-av ± 0.28	1.43 ai-ap ± 0.02	50.95 l-r ± 0.29	189.27 d-n ± 11.27	491.83 m-q ± 3.76
AC28*WOM	15.00 m-aa ± 2.52	13.00 i-x ± 3.00	5.96 p-aj ± 0.21	9.91 ah-au ± 0.18	1.37 ae-ah ± 0.08	24.22 an-aq ± 0.39	1.64 ac-ak ± 0.04	57.44 b-e ± 2.14	191.24 d-n ± 28.97	545.36 i ± 9.66
AC28*WM	28.33 b-g ± 3.53	25.33 a ± 3.18	6.49 k-aa ± 0.09	14.30 b-e ± 0.35	1.50 aa-ac ± 0.09	26.11 aj-al ± 0.28	1.81 w-ae ± 0.02	56.43 d-g ± 0.23	185.08 d-p ± 29.68	530.44 ijk ± 9.89
AC29*WOM	20.00 h-q ± 3.21	16.00 e-s ± 2.65	6.66 i-x ± 0.34	14.29 b-e ± 0.21	1.29 ah-al ± 0.08	22.89 at-av ± 0.39	1.54 af-ao ± 0.04	56.87 c-f ± 2.26	159.67 f-u ± 34.58	473.71 o-t ± 11.53
AC29*WM	20.33 h-p ± 1.86	14.33 g-u ± 1.67	8.05 a-f ± 0.20	11.29 p-ag ± 0.86	1.83 r-u ± 0.09	32.11 a-g ± 0.28	2.25 j-r ± 0.02	56.32 d-h ± 0.19	209.59 d-i ± 36.73	605.56 g ± 12.24
AC30*WOM	12.33 p-af ± 0.88	11.67 m-aa ± 0.88	8.47 abc ± 0.09	12.52 h-o ± 0.05	1.54 z-ab ± 0.08	30.67 a-h ± 0.39	1.89 v-ac ± 0.04	52.10 i-q ± 1.63	221.42 d-g ± 1.46	623.87 ef ± 0.49
AC30*WM	22.00 f-n ± 1.53	18.67 c-k ± 2.03	8.53 ab ± 0.10	14.91 bc ± 0.26	1.72 vwx ± 0.09	33.00 a-f ± 0.28	2.10 n-v ± 0.02	50.15 m-w ± 0.21	288.70 bc ± 22.12	637.07 e ± 7.73
AC31*WOM	14.33 n-ac ± 1.20	12.00 l-z ± 1.00	5.95 p-aj ± 0.27	10.12 af-as ± 0.23	1.29 ah-al ± 0.08	21.78 aw-az ± 0.39	1.74 y-ah ± 0.04	59.36 bcd ± 2.42	168.58 e-r ± 25.75	471.16 p-u ± 8.58
AC31*WM	17.67 k-w ± 2.33	15.67 e-s ± 2.19	5.8 s-ak ± 0.05	12.70 g-o ± 0.47	1.35 ae-ah ± 0.09	25.11 am-an ± 0.28	1.65 ac-ak ± 0.02	53.91 e-m ± 0.26	210.74 d-i ± 13.74	546.97 i ± 4.58
AC32*WOM	14.67 n-ab ± 1.67	14.00 g-v ± 1.53	8.44 abc ± 0.12	9.61 al-av ± 0.23	1.33 ag-aj ± 0.08	26.22 aj-ak ± 0.39	1.74 y-ag ± 0.04	50.64 m-s ± 1.91	135.64 j-z ± 27.58	422.51 z-ac ± 9.19
AC32*WM	19.33 i-s ± 1.20	16.00 e-s ± 1.00	7.61 b-k ± 0.19	11.29 p-ag ± 0.38	1.16 an-ap ± 0.09	23.67 ap-au ± 0.28	1.47 ah-ap ± 0.02	49.15 o-aa ± 0.32	198.95 d-l ± 34.13	458.16 t-w ± 11.38

AC33*WOM	18.00 j-v ± 2.08	14.00 g-v ± 1.73	6.07 o-ah ± 0.22	10.41 ac-ar ± 0.06	0.91 at-av ± 0.08	21.33 ay-bb ± 0.39	1.05 as-aw ± 0.04	42.66 al-aw ± 2.25	112.65 p-ah ± 8.56	422.40 z-ac ± 2.85
AC33*WM	21.00 f-o ± 1.15	16.33 e-r ± 1.20	6.48 k-aa ± 0.06	9.51 an-av ± 0.41	0.87 au-aw ± 0.09	20.78 ba-bd ± 0.28	1.05 as-aw ± 0.02	42.07 an-ax ± 0.45	122.82 m-ae ± 13.72	494.07 l-p ± 4.57
AC34*WOM	32.67 abc ± 1.15	20.33 a-g ± 2.60	8.26 a-e ± 0.12	9.13 aq-av ± 0.34	1.04 aq-as ± 0.08	22.22 av-ay ± 0.39	1.21 ap-au ± 0.04	46.63 a-j ± 2.21	150.11 g-w ± 39.10	496.21 l-o ± 13.03
AC34*WM	20.00 h-q ± 5.04	11.00 o-ac ± 0.58	7.66 b-j ± 0.17	11.00 v-aj ± 0.42	1.15 an-ap ± 0.09	25.33 ak-am ± 0.28	1.31 an-as ± 0.02	45.38 aa-ap ± 0.33	95.22 r-ak ± 10.55	438.95 w-aa ± 3.52
AC35*WOM	15.00 m-aa ± 1.53	13.33 h-w ± 0.88	6.47 k-aa ± 0.55	12.47 i-r ± 0.42	2.07 k-n ± 0.08	44.78 qr ± 0.39	2.21 k-s ± 0.04	50.18 m-s ± 1.10	118.98 n-af ± 22.52	464.49 s-v ± 7.51
AC35*WM	20.00 h-q ± 4.51	15.33 e-t ± 2.40	5.59 w-an ± 0.32	8.46 a-v ± 0.25	2.21 ghi ± 0.09	44.11 rst ± 0.28	2.56 e-i ± 0.02	46.25 x-al ± 0.17	149.45 g-w ± 23.20	535.37 ijk ± 7.73
AC36*WOM	11.67 r-af ± 0.88	11.33 n-ab ± 0.67	5.88 q-aj ± 0.25	9.66 al-av ± 0.05	1.42 ac-af ± 0.08	27.67 a-l ± 0.39	1.60 ad-am ± 0.04	51.37 j-r ± 1.82	55.34 ac-ao ± 4.07	188.50 ar-as ± 1.36
AC36*WM	27.67 b-h ± 2.40	23.67 abc ± 2.40	5.71 t-al ± 0.19	11.13 s-ah ± 0.24	1.46 ab-ad ± 0.09	28.44 a-l ± 0.28	1.42 aj-aq ± 0.02	51.21 k-r ± 0.25	88.37 t-an ± 16.70	295.03 al-an ± 5.57
AC37*WOM	20.00 h-q ± 4.04	19.33 a-i ± 4.70	6.88 g-s ± 0.14	10.71 aa-ao ± 0.30	1.16 an-ap ± 0.08	24.78 am-ao ± 0.39	1.31 an-as ± 0.04	46.70 t-ai ± 1.98	89.89 t-am ± 1.20	267.44 ao-ap ± 0.40
AC37*WM	28.00 b-h ± 3.61	21.00 a-f ± 1.00	5.82 r-ak ± 0.12	10.71 aa-ao ± 0.24	1.29 ah-al ± 0.09	27.67 a-l ± 0.28	1.81 x-ae ± 0.02	46.58 t-ak ± 0.30	166.82 e-s ± 8.54	471.47 p-u ± 2.85
AC38*WOM	27.33 b-i ± 4.18	23.00 a-d ± 2.52	7.06 f-p ± 0.10	9.61 al-av ± 0.18	0.96 as-au ± 0.08	20.89 az-bc ± 0.39	1.12 ar-av ± 0.04	52.97 g-n ± 2.34	135.09 j-aa ± 14.69	417.18 aa-ad ± 4.90
AC38*WM	25.00 d-k ± 2.31	21.67 a-e ± 1.76	5.72 s-al ± 0.18	10.41 ac-ar ± 0.17	1.24 aj-an ± 0.09	23.33 aq-au ± 0.28	1.52 af-ao ± 0.02	45.85 z-an ± 0.29	103.49 q-ak ± 25.30	413.67 ab-ad ± 8.43
AC39*WOM	19.00 j-t ± 2.08	17.33 d-o ± 1.67	6.08 o-ah ± 0.03	12.40 j-t ± 0.29	1.21 al-an ± 0.08	21.67 ax-ba ± 0.39	1.48 af-ao ± 0.04	56.02 d-h ± 2.39	107.60 q-ai ± 12.32	333.46 a-i ± 4.11
AC39*WM	21.00 f-o ± 1.15	18.67 c-k ± 0.88	6.18 o-ag ± 0.03	11.50 n-ad ± 0.78	1.22 ak-an ± 0.09	22.33 av-ax ± 0.28	1.55 ae-an ± 0.02	54.70 e-k ± 0.29	252.79 cd ± 48.98	636.66 e ± 16.33
AC40*WOM	11.00 t-af ± 1.00	10.33 q-ad ± 0.88	6.31 m-ac ± 0.12	12.70 g-o ± 0.42	1.32 ag-aj ± 0.08	24.11 ao-ar ± 0.39	1.62 ad-al ± 0.04	54.95 e-j ± 2.13	73.23 x-ao ± 9.13	304.09 ak-am ± 3.04
AC40*WM	19.33 i-s ± 0.88	17.00 d-p ± 0.58	6.51 k-aa ± 0.09	12.17 j-x ± 0.64	1.34 af-ai ± 0.09	25.11 am-an ± 0.28	1.73 y-ah ± 0.02	53.18 g-n ± 0.27	87.88 t-an ± 3.27	299.76 al-an ± 1.09
AC41*WOM	18.67 j-t ± 4.10	16.67 d-q ± 3.76	8.21 a-e ± 0.20	10.29 ac-ar ± 0.32	1.19 am-ap ± 0.08	25.33 ak-am ± 0.39	1.48 ag-ap ± 0.04	47.01 s-ag ± 1.94	120.65 m-ae ± 44.91	470.04 q-u ± 14.97
AC41*WM	21.00 f-o ± 3.61	16.00 e-s ± 1.53	6.64 i-x ± 0.41	12.33 j-u ± 0.15	0.92 at-av ± 0.09	21.89 aw-ay ± 0.28	1.14 ar-av ± 0.02	41.81 ap-ax ± 0.43	107.54 q-ai ± 15.76	376.04 af-ag ± 5.25
AC42*WOM	17.67 k-w ± 2.91	15.00 f-t ± 2.89	7.55 b-l ± 0.13	10.81 y-an ± 0.26	1.41 ad-ag ± 0.08	27.89 a-l ± 0.39	1.69 aa-ai ± 0.04	50.54 m-t ± 1.80	82.73 v-ao ± 7.25	267.95 ao-ap ± 2.42
AC42*WM	21.00 f-o ± 2.00	16.67 d-q ± 1.45	6.5 k-aa ± 0.18	10.89 x-am ± 0.44	1.23 ak-an ± 0.09	25.22 al-am ± 0.28	1.51 af-ao ± 0.02	48.58 p-ab ± 0.31	120.93 m-ae ± 8.45	361.59 ag-ah ± 2.82
AC43*WOM	13.67 o-ad ± 0.88	13.67 h-v ± 0.88	4.22 ar-ax ± 0.29	10.13 ae-ar ± 0.24	2.30 f ± 0.08	50.11 jk ± 0.39	2.49 g-j ± 0.04	46.00 y-am ± 0.98	210.43 d-i ± 15.85	539.41 ij ± 5.28
AC43*WM	20.33 h-p ± 1.76	17.67 c-n ± 1.45	4.19 as-ax ± 0.01	10.21 ad-ar ± 0.39	2.05 l-o ± 0.09	49.56 kl ± 0.28	2.42 g-l ± 0.02	41.29 aq-ay ± 0.19	214.11 d-h ± 18.24	512.38 klm ± 6.08
AC44*WOM	23.67 e-l ± 2.19	18.33 c-l ± 1.45	6.27 m-af ± 0.22	9.17 aq-av ± 0.09	0.82 a-w ± 0.08	19.33 be-bf ± 0.39	0.93 av-ay ± 0.04	42.21 am-ax ± 2.47	70.85 x-ao ± 5.14	449.93 u-x ± 1.71
AC44*WM	32.33 bcd ± 4.26	18.33 c-l ± 3.76	6.01 p-ai ± 0.25	9.21 aq-av ± 0.19	0.89 au-aw ± 0.09	22.67 au-aw ± 0.28	1.04 at-ax ± 0.02	39.40 au-bb ± 0.44	96.00 r-ak ± 19.11	424.84 y-ac ± 6.37
AC45*WOM	18.00 j-v ± 2.65	13.67 h-v ± 2.40	6.87 g-t ± 0.25	9.73 aj-av ± 0.22	1.11 ap-aq ± 0.08	21.89 aw-ay ± 0.39	1.27 ao-at ± 0.04	50.56 m-t ± 2.29	111.93 p-ah ± 10.59	355.47 ag-ah ± 3.53
AC45*WM	18.67 j-t ± 1.45	14.00 g-v ± 1.00	7.22 e-o ± 0.37	8.85 as-av ± 0.19	1.28 ah-am ± 0.09	28.56 a-l ± 0.28	1.55 ae-an ± 0.02	44.63 ac-aq ± 0.30	177.13 e-q ± 12.90	499.26 lmn ± 4.30
AC46*WOM	28.00 b-h ± 3.21	19.00 b-j ± 3.06	7.02 f-q ± 0.45	9.69 ak-av ± 0.09	0.81 a-w ± 0.08	20.56 bb-bd ± 0.39	0.96 au-ay ± 0.04	45.70 aa-ao ± 2.29	84.67 u-ao ± 23.46	406.19 ac-ae ± 7.82
AC46*WM	28.33 b-g ± 2.03	19.33 a-i ± 1.20	6.81 h-v ± 0.21	11.77 m-ab ± 0.34	1.12 ao-aq ± 0.09	24.44 am-ap ± 0.28	1.31 an-as ± 0.02	39.34 a -bb ± 0.34	100.09 r-ak ± 18.35	493.01 l-q ± 6.12
AC47*WOM	19.67 i-r ± 2.85	15.33 e-t ± 2.19	4.95 ah-aw ± 0.21	8.81 at-av ± 0.33	0.66 a-x ± 0.08	17.78 b-g ± 0.39	0.77 a-y ± 0.04	37.22 ba-bd ± 2.61	51.01 ae-ao ± 14.15	323.21 ai-ak ± 4.72
AC47*WM	37.33 a ± 4.91	25.00 ab ± 3.61	5.23 ac-as ± 0.19	9.77 ai-au ± 0.26	0.67 a-x ± 0.09	18.67 b-f ± 0.28	0.78 a-y ± 0.02	35.69 bc-bd ± 0.55	88.14 t-an ± 13.95	414.50 ab-ad ± 4.65
AC48*WOM	28.00 b-h ± 2.08	17.67 c-n ± 1.20	5.56 x-ao ± 0.21	12.38 j-t ± 0.21	0.70 a-x ± 0.08	19.22 be-bf ± 0.39	0.81 aw-ay ± 0.04	36.20 bb-bd ± 2.40	92.87 s-al ± 7.06	420.16 aa-ad ± 2.35
AC48*WM	33.67 ab ± 2.33	19.00 b-j ± 1.53	5.68 u-al ± 0.15	9.13 ar-av ± 0.27	0.70 a-x ± 0.09	20.67 bb-bd ± 0.28	0.81 aw-ay ± 0.02	33.82 bcd ± 0.55	62.35 z-ao ± 16.42	385.63 ae-af ± 5.47
AC49*WOM	13.67 o-ad ± 3.28	11.67 m-aa ± 1.76	4.13 as-ax ± 0.10	11.09 t-ah ± 0.38	2.12 jkl ± 0.08	42.78 vw ± 0.39	2.39 g-m ± 0.04	49.61 n-z ± 1.17	122.59 m-ae ± 2.76	492.08 m-q ± 0.92
AC49*WM	16.33 l-x ± 0.88	9.67 s-ad ± 0.33	4.24 aq-ax ± 0.06	10.37 ac-ar ± 0.18	2.13 jkl ± 0.09	43.78 stu ± 0.28	2.40 g-l ± 0.02	48.53 p-ab ± 0.18	187.83 d-o ± 16.58	488.02 n-r ± 5.53

	TNP	SNP	SL	AL	SW	SNS	SWS	1000 KW	TY	STW
AC50*WOM	21.00 f-o ± 2.08	18.00 c-m ± 2.65	5.19 ac-as ± 0.20	9.92 ah-au ± 0.60	1.70 wx ± 0.08	40.78 yz ± 0.39	1.90 u-ac ± 0.04	41.62 ap-ax ± 1.17	216.33 d-h ± 9.79	546.30 i ± 3.26
AC50*WM	17.33 k-w ± 2.91	12.00 l-z ± 1.53	5.19 ac-as ± 0.20	11.01 v-aj ± 0.91	1.71 vwx ± 0.09	43.11 uv ± 0.28	2.00 r-y ± 0.02	39.67 as-bb ± 0.23	211.35 d-i ± 24.38	598.69 h ± 8.13
AC51*WOM	10.00 v-af ± 0.58	9.00 t-ae ± 0.58	6.54 j-y ± 0.03	12.14 j-x ± 0.29	2.00 no ± 0.08	50.78 ij ± 0.39	2.35 g-n ± 0.04	39.47 at-bb ± 0.93	62.57 z-ao ± 23.83	283.46 am-ao ± 7.94
AC51*WM	14.00 n-ad ± 1.53	8.00 u-ae ± 1.15	5.54 x-ao ± 0.33	13.03 f-m ± 0.20	1.81 stu ± 0.09	46.44 no ± 0.28	1.92 t-ab ± 0.02	38.94 aw-bc ± 0.22	75.18 w-ao ± 9.73	298.77 al-an ± 3.24
AC52*WOM	30.00 b-e ± 1.73	17.67 c-n ± 1.45	7.41 c-m ± 0.21	9.58 am-av ± 0.42	0.97 ar-at ± 0.08	19.44 be-bf ± 0.39	1.15 ar-av ± 0.04	49.85 n-x ± 2.57	59.21 aa-ao ± 3.30	293.99 al-an ± 1.10
AC52*WM	18.67 j-t ± 1.20	15.33 e-t ± 1.45	6.06 p-ai ± 0.23	9.35 ap-av ± 0.32	0.85 av-aw ± 0.09	20.11 bc-be ± 0.28	0.98 au-ay ± 0.02	42.27 am-ax ± 0.46	81.31 v-ao ± 11.31	440.60 w-aa ± 3.77
AC53*WOM	26.00 c-j ± 4.16	16.67 d-q ± 2.40	5.37 z-aq ± 0.14	9.60 al-av ± 0.29	0.68 a-x ± 0.08	17.22 b-g ± 0.39	0.79 ax-ay ± 0.04	39.34 a -bb ± 2.73	43.31 af-ao ± 6.28	344.22 ah-ai ± 2.09
AC53*WM	20.67 g-o ± 1.45	16.67 d-q ± 0.88	6.17 o-ag ± 0.11	10.25 ac-ar ± 0.46	0.97 ar-at ± 0.09	26.67 a-j ± 0.28	1.15 ar-av ± 0.02	36.45 bb-bd ± 0.40	80.51 v-ao ± 7.62	398.72 ad-ae ± 2.54
AC54*WOM	20.33 h-p ± 3.18	15.33 e-t ± 1.20	8.97 a ± 0.42	10.17 ae-ar ± 0.12	1.44 ac-ae ± 0.08	24.00 ao-as ± 0.39	1.74 y-ag ± 0.04	59.85 bc ± 2.20	103.19 q-ak ± 22.73	304.51 ak-am ± 7.58
AC54*WM	17.33 k-w ± 2.03	14.33 g-u ± 2.19	6.75 i-w ± 0.25	10.07 ag-at ± 0.23	1.18 an-ap ± 0.09	25.11am-an ± 0.28	1.38 ak-ar ± 0.02	46.78 t-ah ± 0.32	82.20 v-ao ± 1.57	265.45 ao-ap ± 0.52
AC55*WOM	19.00 j-t ± 1.15	15.33 e-t ± 1.67	6.78 i-v ± 2.33	11.81 l-ab ± 0.37	2.03 mno ± 0.08	48.33 m ± 0.39	2.60 e-h ± 0.04	52.70 h-o ± 0.99	318.66 ab ± 28.38	720.57 b ± 9.46
AC55*WM	15.00 m-aa ± 0.58	13.33 h-w ± 0.33	5.39 y-ap ± 0.06	11.19 q-ah ± 0.54	2.87 b ± 0.09	54.44 f ± 0.28	3.45 b ± 0.02	41.90 ao-ax ± 0.13	356.27 a ± 88.78	762.60 a ± 29.59
AC56*WOM	21.00 f-o ± 3.06	14.33 g-u ± 2.91	6.06 o-ah ± 0.71	10.98 w-ak ± 0.31	1.82 r-u ± 0.08	39.78 a-a ± 0.39	2.44 g-k ± 0.04	45.75 aa-an ± 1.23	49.73 ae-ao ± 11.80	279.20 an-ao ± 3.93
AC56*WM	23.00 e-m ± 1.73	19.67 a-h ± 1.76	5.19 ac-as ± 0.14	11.01 v-aj ± 0.13	1.69 wx ± 0.09	41.89 wx ± 0.28	1.98 s-z ± 0.02	40.36 ar-ba ± 0.23	118.58 n-ag ± 15.97	478.41 n-t ± 5.32
AC57*WOM	15.33 m-z ± 0.88	12.33 k-z ± 1.45	6.24 n-ag ± 0.21	9.19 aq-av ± 0.16	1.69 wx ± 0.08	45.22 pq ± 0.39	2.02 q-x ± 0.04	39.90 ar-bb ± 1.03	113.62 o-ah ± 5.42	357.34 ag-ah ± 1.81
AC57*WM	15.33 m-z ± 1.76	12.67 j-y ± 0.88	6.53 j-z ± 0.10	8.71 au-av ± 0.23	2.24 fgh ± 0.09	56.11 e ± 0.28	2.62 efg ± 0.02	37.44 az-bc ± 0.17	142.69 h-y ± 3.50	417.31 aa-ad ± 1.17
AC58*WOM	15.67 l-y ± 2.40	13.33 h-w ± 2.03	5.65 v-am ± 0.12	13.33 e-k ± 0.13	2.14 ijk ± 0.08	41.11 xy ± 0.39	3.13 c ± 0.04	52.16 i-p ± 1.23	143.06 h-y ± 20.44	384.09 ae-af ± 6.81
AC58*WM	17.67 k-w ± 3.18	15.67 e-s ± 2.85	5.89 q-aj ± 0.12	12.41 j-s ± 0.27	2.48 e ± 0.09	51.11 hi ± 0.28	3.00 c ± 0.02	48.48 p-ac ± 0.15	209.82 d-i ± 25.86	663.44 d ± 8.62
AC59*WOM	18.33 j-u ± 4.10	15.00 f-t ± 3.21	5.16 ad-at ± 0.17	13.10 e-l ± 0.19	2.95 b ± 0.08	59.33 c ± 0.39	3.44 b ± 0.04	49.74 n-y ± 0.84	220.68 d-g ± 10.02	574.80 i ± 3.34
AC59*WM	18.00 j-v ± 4.16	15.33 e-t ± 2.96	5.56 x-ao ± 0.21	12.87 f-m ± 0.28	3.49 a ± 0.09	72.11 a ± 0.28	4.03 a ± 0.02	48.34 q-ad ± 0.11	363.27 a ± 35.29	739.16 b ± 11.76

TNP: number of the tillers per plant, SNP: number of the spikes per plant, SL: spike length, AL: awan length, SW: spike weight, SNS: number of seeds per spike, SWS: seed weight per spike, 1000 KW: one thousand kernel weight, TY: total yield per plot, STW: straw weight per plot. WOM: control (without application of morginga organ extract), WM: with application of moringa organ extract. Any values of means with the same letter in the same column are not significant according to the Multiple Rang Duncan's test at p ≤ 0.05.