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Characteristics of Progenies drived from Anther Culture of Naked Barley (*H. vulgare*)

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Objectives

To evaluate the agronomic characteristics in progenies of regenerated plants drived from anther culture of naked barley(*Hordeum vulgare* L.).

Materials and Method

- Materials : F_1 hybrids (three cross combinations) - 294 lines
- Cultivation : Seedling Date - 25 October, Density, 5°x 60cm

Results and Discussion

Anther culture-derived progenies(A_2), 294 lines were evaluated some agronomic variation with their parents for heading date, culm length, panicle length, awn length and number of spikelets per panicle. In the progenies derived from anther culture from the F_1 hybrid HB15375, the days to heading was delayed about 10 days than their parents. Culm and panicle length showed normal distribution, while awn length and number of grains per panicle a bimodal distribution centered at the means of their parents. In the progenies from anther culture of Duwonchapssalbori, culm length, panicle length, awn length, and number of grains per panicle showed a stable normal distribution. In 81 A_2 lines of Dusan 29, however, the characters showed discontinuous variations.

Table. Agricultural characteristics of A_2 line progenies derived from anther culture of naked barley

Variety	Culm length (cm)	Panicle length (cm)	Awn length (cm)	No. of spikelets
	Mean±SD	Mean±SD	Mean±SD	Mean±SD
HB 153751)	68.9±11.9[a†]	7.6±1.3[ab]	5.2±3.4[c]	45.7±36.4[b]
-HB14127(°œ)2)	63.8±5.3[a]	7.9±0.7[a]	5.8±3.7[b]	60.0±43.2[a]
-Suweon358(°Œ)3)	55.6± 5.1[b]	7.7±0.9[b]	7.6±4.6[a]	29.3±14.4[c]
Between 1) and 2)				
LSD(0.05)	4.94[ns]	0.50[ns]	2.19[ns]	18.99**
CV (%)	9.88	8.49	45.73	57.06
Between 1) and 3)				
LSD(0.05)	4.49**	0.64[ns]	2.55[ns]	6.81[ns]
CV (%)	9.59	11.12	46.75	31.36
Dooweonchap -ssalbori	69.3±8.3	8.5±0.9	0.3±0.7	24.0± 0.6
Donor plant	61.8± 2.4	9.3±1.3	9.6±1.1	25.5± 2.8
LSD(0.05)	1.89**	1.09[ns]	0.72[ns]	3.55[ns]
CV (%)	2.72	11.96	7.17	14.02
Doosan 29	66.4±20.6	7.1±1.8	7.1±4.1	40.0± 2.8
Donor plant	62.0± 4.3	8.4±0.5	10.7±0.6	23.8±1.9
LSD(0.05)	8.35[ns]	0.64[ns]	1.39*	8.80[ns]
CV (%)	13.25	7.80	13.67	32.86

*,** Significant at 0.05 and 0.01 levels of probability, respectively. ns, no significant.
†' Duncan°Æs multiple range test at 5% level.

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