

Supplementary Data

Classification of genetic variation in garlic (*Allium sativum* L.) using SSR markers

Man Hyun Jo¹, In Ki Ham¹, Kyaw Thu Moe², Soon-Wook Kwon^{2,3}, Fu-Hao Lu²,
Yong-Jin Park^{2,3}, Woon Seob Kim¹, Mi Kyoung Won¹, Tae Il Kim¹, Eun Mo Lee¹

Supplementary Table 1. Descriptions and inferred populations of the 120 garlic accessions used in this study.

ID	Cultivar	Origin	Plant height (cm)	Bulb Diameter (mm)	Bulb Height (mm)	Bulb dry weight (g/bulb)	Clove color	Cloves per bulb	Inferred Population
Geumsan-1	Geumsan	Korea	61	51.62	39.07	38.3	Purple	7	3
Geumsan-2	Geumsan	Korea	50	51.51	41.26	36.5	Purple	7	2
Geumsan-3	Geumsan	Korea	63	56.59	40.90	36.2	Purple	7	2
Geumsan-4	Geumsan	Korea	72	54.70	41.98	39.2	Purple	6	3
Geumsan-5	Geumsan	Korea	53	46.25	38.54	42.1	Purple	8	2
Geumsan-6	Geumsan	Korea	55	46.15	38.09	39.7	Purple	6	2
Geumsan-7	Geumsan	Korea	61	50.83	38.14	38.1	Purple	6	2
Geumsan-8	Geumsan	Korea	72	50.64	41.63	43.4	Purple	6	2
Geumsan-9	Geumsan	Korea	58	52.62	40.70	44.7	Purple	7	3
Geumsan-10	Geumsan	Korea	53	49.90	38.00	38.2	Purple	6	2
Namdo-11	Namdo	China	94	56.89	35.97	53.6	White	8	2
Namdo-12	Namdo	China	85	52.43	37.70	45.5	White	7	3
Namdo-13	Namdo	China	82	53.12	36.05	35.3	White	7	2
Namdo-14	Namdo	China	74	57.31	36.16	47.6	White	7	2
Namdo-15	Namdo	China	87	57.67	41.45	39.3	White	8	2
Namdo-16	Namdo	China	97	57.56	37.57	52.3	White	7	2
Namdo-17	Namdo	China	85	52.87	34.43	51.2	White	8	3
Namdo-18	Namdo	China	86	57.03	35.90	47.0	White	7	2
Namdo-19	Namdo	China	80	53.61	36.30	50.6	White	6	2
Namdo-20	Namdo	China	85	53.31	37.38	39.2	White	5	3
Nonsan-21	Nonsan	Korea	76	42.80	37.52	40.0	Purple	6	2
Nonsan-22	Nonsan	Korea	70	49.35	40.55	33.6	Purple	6	2
Nonsan-23	Nonsan	Korea	60	52.16	38.21	34.3	Purple	7	2
Nonsan-24	Nonsan	Korea	60	48.18	37.70	45.3	Purple	7	2
Nonsan-25	Nonsan	Korea	69	49.36	35.81	40.4	Purple	7	3
Nonsan-26	Nonsan	Korea	65	45.97	37.30	42.3	Purple	8	2
Nonsan-27	Nonsan	Korea	56	43.09	35.90	36.2	Purple	7	2
Nonsan-28	Nonsan	Korea	62	44.09	47.46	39.3	Purple	6	3
Nonsan-29	Nonsan	Korea	65	41.47	36.00	42.6	Purple	8	2
Nonsan-30	Nonsan	Korea	65	38.88	34.67	41.5	Purple	7	2
Seosan-1-31	Seosan-1	Korea	70	46.22	35.95	32.5	Purple	6	2
Seosan-1-32	Seosan-1	Korea	75	46.40	35.13	32.9	Purple	7	2
Seosan-1-33	Seosan-1	Korea	65	52.29	40.64	38.0	Purple	8	3
Seosan-1-34	Seosan-1	Korea	62	48.72	39.90	45.4	Purple	6	2
Seosan-1-35	Seosan-1	Korea	70	48.09	36.55	42.4	Purple	7	2
Seosan-1-36	Seosan-1	Korea	76	52.48	40.13	34.2	Purple	6	3
Seosan-1-37	Seosan-1	Korea	60	45.89	37.42	27.2	Purple	6	2
Seosan-1-38	Seosan-1	Korea	73	46.90	35.26	45.6	Purple	9	2
Seosan-1-39	Seosan-1	Korea	52	48.65	36.75	41.7	Purple	7	2
Seosan-1-40	Seosan-1	Korea	60	45.88	36.91	37.0	Purple	7	2
Seosan-3-41	Seosan-3	Korea	70	50.92	30.53	41.5	Purple	8	3
Seosan-3-42	Seosan-3	Korea	62	52.29	41.18	42.6	Purple	6	2
Seosan-3-43	Seosan-3	Korea	72	47.64	38.85	34.4	Purple	5	2
Seosan-3-44	Seosan-3	Korea	65	43.00	35.70	40.4	Purple	7	3
Seosan-3-45	Seosan-3	Korea	66	44.25	37.49	34.7	Purple	6	2
Seosan-3-46	Seosan-3	Korea	50	46.97	37.15	33.2	Purple	9	Admixture

ID	Cultivar	Origin	Plant height (cm)	Bulb Diameter (mm)	Bulb Height (mm)	Bulb dry weight (g/bulb)	Clove color	Cloves per bulb	Inferred Population
Seosan-3-47	Seosan-3	Korea	68	44.47	35.05	37.4	Purple	6	2
Seosan-3-48	Seosan-3	Korea	57	46.23	38.58	41.1	Purple	7	2
Seosan-3-49	Seosan-3	Korea	65	47.48	36.90	33.5	Purple	8	3
Seosan-3-50	Seosan-3	Korea	63	48.67	38.79	35.5	Purple	7	2
Seosan-2-51	Seosan-2	Korea	85	51.81	39.07	41.1	Purple	6	2
Seosan-2-52	Seosan-2	Korea	85	50.01	38.63	37.9	Purple	8	3
Seosan-2-53	Seosan-2	Korea	58	50.40	39.52	35.6	Purple	6	2
Seosan-2-54	Seosan-2	Korea	55	46.36	35.67	32.4	Purple	7	2
Seosan-2-55	Seosan-2	Korea	57	49.84	36.53	29.9	Purple	7	2
Seosan-2-56	Seosan-2	Korea	62	46.84	35.72	38.7	Purple	6	2
Seosan-2-57	Seosan-2	Korea	65	41.89	43.80	35.9	Purple	6	3
Seosan-2-58	Seosan-2	Korea	60	44.84	36.12	31.1	Purple	7	2
Seosan-2-59	Seosan-2	Korea	66	46.69	37.40	36.6	Purple	8	2
Seosan-2-60	Seosan-2	Korea	57	43.56	33.84	32.5	Purple	7	3
Daeseo-61	Daeseo	Spain	57	48.49	32.30	39.7	Purple	8	4
Daeseo-62	Daeseo	Spain	57	44.80	34.53	30.2	Purple	9	4
Daeseo-63	Daeseo	Spain	80	48.34	29.94	40.7	Purple	10	4
Daeseo-64	Daeseo	Spain	52	47.17	31.72	37.8	Purple	8	4
Daeseo-65	Daeseo	Spain	52	52.70	30.98	33.8	Purple	7	4
Daeseo-66	Daeseo	Spain	58	45.31	37.71	34.2	Purple	9	4
Daeseo-67	Daeseo	Spain	72	52.12	32.26	33.2	Purple	8	4
Daeseo-68	Daeseo	Spain	70	47.89	32.15	30.9	Purple	9	4
Daeseo-69	Daeseo	Spain	65	48.03	32.33	30.6	Purple	8	4
Daeseo-70	Daeseo	Spain	60	45.44	29.09	32.4	Purple	8	4
Aomori-71	Aomori	Japan	100	30.21	27.42	26.6	White	5	1
Aomori-72	Aomori	Japan	85	26.13	25.90	19.1	White	4	1
Aomori-73	Aomori	Japan	92	31.62	33.76	28.8	White	5	Admixture
Aomori-74	Aomori	Japan	85	30.44	29.24	31.1	White	4	1
Aomori-75	Aomori	Japan	100	35.47	30.98	16.0	White	5	1
Aomori-76	Aomori	Japan	95	30.57	27.62	14.8	White	5	Admixture
Aomori-77	Aomori	Japan	100	30.52	29.64	16.5	White	5	1
Aomori-78	Aomori	Japan	95	25.45	31.45	23.1	White	4	1
Aomori-79	Aomori	Japan	100	24.10	25.81	18.8	White	5	1
Aomori-80	Aomori	Japan	75	27.09	31.40	22.7	White	5	1
Taeon-81	Taeon	Korea	54	54.24	43.24	38.4	Purple	7	3
Taeon-82	Taeon	Korea	55	43.70	32.76	36.7	Purple	7	2
Taeon-83	Taeon	Korea	65	53.63	43.12	43.5	Purple	7	2
Taeon-84	Taeon	Korea	65	41.89	40.71	50.3	Purple	7	3
Taeon-85	Taeon	Korea	77	51.98	42.91	43.2	Purple	6	2
Taeon-86	Taeon	Korea	62	46.08	35.14	45.3	Purple	6	2
Taeon-87	Taeon	Korea	68	51.91	39.29	38.0	Purple	7	2
Taeon-88	Taeon	Korea	69	46.27	36.94	44.7	Purple	8	2
Taeon-89	Taeon	Korea	72	46.29	36.04	35.2	Purple	6	3
Taeon-90	Taeon	Korea	55	44.58	33.20	41.8	Purple	7	2
Taeon-1-91	Taeon-1	Korea	87	41.34	38.85	29.5	Purple	7	2
Taeon-1-92	Taeon-1	Korea	87	49.12	40.61	29.1	Purple	7	3
Taeon-1-93	Taeon-1	Korea	63	47.19	37.33	32.2	Purple	8	2
Taeon-1-94	Taeon-1	Korea	62	46.69	36.65	28.2	Purple	6	2
Taeon-1-95	Taeon-1	Korea	60	41.54	34.17	32.4	Purple	7	2
Taeon-1-96	Taeon-1	Korea	50	41.51	33.78	28.0	Purple	7	2
Taeon-1-97	Taeon-1	Korea	50	45.44	36.03	31.5	Purple	9	3
Taeon-1-98	Taeon-1	Korea	55	43.94	36.22	26.6	Purple	6	2
Taeon-1-99	Taeon-1	Korea	55	40.89	33.09	29.9	Purple	7	2
Taeon-1-100	Taeon-1	Korea	50	43.79	36.16	31.4	Purple	7	3
Taeon-2-101	Taeon-2	Korea	67	47.90	38.82	35.6	Purple	8	2
Taeon-2-102	Taeon-2	Korea	60	45.19	37.69	37.7	Purple	6	2
Taeon-2-103	Taeon-2	Korea	77	49.51	37.72	40.2	Purple	7	2
Taeon-2-104	Taeon-2	Korea	67	47.28	37.20	42.0	Purple	8	3
Taeon-2-105	Taeon-2	Korea	75	48.73	37.04	33.8	Purple	7	3
Taeon-2-106	Taeon-2	Korea	70	44.04	38.30	38.1	Purple	6	2
Taeon-2-107	Taeon-2	Korea	73	43.92	37.71	32.9	Purple	7	2
Taeon-2-108	Taeon-2	Korea	90	42.72	35.89	40.3	Purple	6	3
Taeon-2-109	Taeon-2	Korea	75	50.60	39.23	36.9	Purple	7	2
Taeon-2-110	Taeon-2	Korea	66	46.23	38.95	36.2	Purple	7	2

ID	Cultivar	Origin	Plant height (cm)	Bulb Diameter (mm)	Bulb Height (mm)	Bulb dry weight (g/bulb)	Clove color	Cloves per bulb	Inferred Population
Cheonwoon-111	Cheonwoon	Kazakhstan	65	46.09	35.26	37.0	Purple	5	4
Cheonwoon-112	Cheonwoon	Kazakhstan	64	52.17	38.78	37.3	Purple	6	4
Cheonwoon-113	Cheonwoon	Kazakhstan	66	56.49	43.53	38.0	Purple	5	4
Cheonwoon-114	Cheonwoon	Kazakhstan	64	51.19	38.52	37.3	Purple	5	4
Cheonwoon-115	Cheonwoon	Kazakhstan	72	47.79	34.69	38.7	Purple	5	4
Cheonwoon-116	Cheonwoon	Kazakhstan	51	47.92	37.63	34.6	Purple	5	4
Cheonwoon-117	Cheonwoon	Kazakhstan	61	44.84	37.35	38.2	Purple	5	4
Cheonwoon-118	Cheonwoon	Kazakhstan	65	42.44	33.57	34.7	Purple	5	4
Cheonwoon-119	Cheonwoon	Kazakhstan	56	41.83	36.21	38.2	Purple	6	4
Cheonwoon-120	Cheonwoon	Kazakhstan	62	47.12	37.90	38.2	Purple	5	4

Number of accessions corresponds to the garlic active collection number used in Chuncheongnam-do Agricultural Research and Extension Services (CNARES), Republic of Korea.