

Table S1. Plot designs for field experiments.

Sowing Date	Densities Varieties	1.5 Million Plants/ha	3 Million Plants/ha	4.5 Million Plants/ha	6 Million Plants/ha	7.5 Million Plants/ha
5 October	Jimai 22	b ₁ I 1	b ₁ I 2	b ₁ I 3	b ₁ I 4	b ₁ I 5
	Zhoumai 18	b ₁ II 1	b ₁ II 2	b ₁ II 3	b ₁ II 4	b ₁ II 5
	Xinong 529	b ₁ III 1	b ₁ III 2	b ₁ III 3	b ₁ III 4	b ₁ III 5
20 October	Jimai 22	b ₂ I 1	b ₂ I 2	b ₂ I 3	b ₂ I 4	b ₂ I 5
	Zhoumai 18	b ₂ II 1	b ₂ II 2	b ₂ II 3	b ₂ II 4	b ₂ II 5
	Xinong 529	b ₂ III 1	b ₂ III 2	b ₂ III 3	b ₂ III 4	b ₂ III 5
5 November	Jimai 22	b ₃ I 1	b ₃ I 2	b ₃ I 3	b ₃ I 4	b ₃ I 5
	Zhoumai 18	b ₃ II 1	b ₃ II 2	b ₃ II 3	b ₃ II 4	b ₃ II 5
	Xinong 529	b ₃ III 1	b ₃ III 2	b ₃ III 3	b ₃ III 4	b ₃ III 5
15 November	Jimai 22	b ₄ I 1	b ₄ I 2	b ₄ I 3	b ₄ I 4	b ₄ I 5
	Zhoumai 18	b ₄ II 1	b ₄ II 2	b ₄ II 3	b ₄ II 4	b ₄ II 5
	Xinong 529	b ₄ III 1	b ₄ III 2	b ₄ III 3	b ₄ III 4	b ₄ III 5

Table S2. Wheat plant height estimated by full region sampling (unit: cm).

	6 March	28 March	24 April	21 May	6 June
b ₁ I 1	15.51	43.11	84.28	92.02	92.11
b ₁ I 2	12.03	34.14	73.16	82.52	83.39
b ₁ I 3	10.71	26.72	65.53	76.42	77.17
b ₁ I 4	11.26	26.35	64.89	74.53	75.79
b ₁ I 5	12.11	23.55	62.80	75.41	74.07
b ₁ II 1	14.36	43.74	73.31	80.95	81.09
b ₁ II 2	19.86	39.40	65.93	75.88	76.40
b ₁ II 3	16.49	32.96	58.37	69.66	70.69
b ₁ II 4	18.43	34.94	56.60	69.70	70.31
b ₁ II 5	16.22	34.39	52.93	65.17	66.28
b ₁ III 1	15.77	44.20	73.76	78.41	78.30
b ₁ III 2	14.37	36.73	65.35	71.45	72.75
b ₁ III 3	13.16	32.66	60.86	65.08	66.71
b ₁ III 4	16.07	33.34	60.62	66.15	67.19
b ₁ III 5	13.62	29.34	60.26	63.65	66.22
b ₂ I 1	13.23	40.14	84.65	92.96	94.01
b ₂ I 2	16.42	43.99	83.88	93.67	93.62
b ₂ I 3	12.92	38.57	77.69	88.23	88.81
b ₂ I 4	13.99	35.51	75.98	85.67	86.78
b ₂ I 5	13.22	33.86	74.76	84.39	85.40
b ₂ II 1	13.43	43.38	77.42	88.21	88.49
b ₂ II 2	14.97	41.35	71.88	84.11	85.01
b ₂ II 3	16.18	41.07	68.58	81.11	82.39

b ₂ II 4	14.63	38.37	64.23	78.42	79.06
b ₂ II 5	10.78	31.53	59.30	72.32	73.85
b ₂ III 1	11.53	38.85	77.57	85.14	85.79
b ₂ III 2	10.29	38.45	73.37	81.79	81.78
b ₂ III 3	14.06	38.69	70.07	78.60	79.22
b ₂ III 4	10.92	33.83	65.11	74.99	75.20
b ₂ III 5	11.19	31.97	63.00	72.31	73.78
b ₃ I 1	12.94	4.32	53.93	67.28	69.63
b ₃ I 2	15.47	5.67	59.20	71.47	74.38
b ₃ I 3	11.27	4.19	61.07	74.10	76.70
b ₃ I 4	9.43	5.17	60.48	76.67	79.67
b ₃ I 5	15.01	10.75	67.30	82.86	86.16
b ₃ II 1	9.43	3.70	55.76	68.11	70.01
b ₃ II 2	11.50	5.36	57.41	70.37	72.69
b ₃ II 3	11.93	6.24	59.26	72.16	75.42
b ₃ II 4	15.23	12.93	62.06	78.12	80.40
b ₃ II 5	14.45	28.10	62.22	78.43	80.97
b ₃ III 1	20.53	13.93	62.64	73.93	75.66
b ₃ III 2	17.91	9.56	60.27	72.17	74.27
b ₃ III 3	13.88	7.89	61.39	72.20	74.36
b ₃ III 4	19.19	19.25	67.95	79.79	80.96
b ₃ III 5	14.79	23.43	66.69	79.07	80.92
b ₄ I 1	9.36	45.46	90.46	108.03	107.37
b ₄ I 2	13.91	43.97	91.27	110.09	109.16
b ₄ I 3	8.86	41.09	91.50	113.14	110.63
b ₄ I 4	8.49	41.31	94.88	114.49	112.45
b ₄ I 5	8.82	39.02	93.75	112.52	110.17
b ₄ II 1	9.25	47.13	94.61	110.24	110.84
b ₄ II 2	7.10	42.19	93.79	111.64	110.08
b ₄ II 3	8.70	44.54	92.63	111.39	108.80
b ₄ II 4	9.83	44.44	92.79	110.37	108.44
b ₄ II 5	10.33	44.23	93.60	112.21	110.02
b ₄ III 1	12.61	51.05	96.34	112.24	115.73
b ₄ III 2	12.17	47.03	98.62	115.72	115.05
b ₄ III 3	11.22	45.64	96.48	115.55	112.33
b ₄ III 4	10.53	48.08	98.86	114.69	111.85
b ₄ III 5	10.70	46.78	97.70	113.51	111.46
b ₅ I 1	14.85	18.98	66.11	85.11	84.78
b ₅ I 2	9.30	13.56	65.85	85.93	85.42
b ₅ I 3	15.05	13.41	63.18	83.43	83.29
b ₅ I 4	13.63	10.84	61.70	82.32	82.77
b ₅ I 5	11.53	10.00	60.68	80.46	80.38
b ₅ II 1	16.98	22.84	67.86	82.43	81.36
b ₅ II 2	11.77	15.95	62.17	78.64	78.07

b ₅ II 3	14.01	16.81	59.58	76.98	76.93
b ₅ II 4	15.74	12.39	56.92	75.88	76.61
b ₅ II 5	14.81	17.78	58.79	75.77	76.78
b ₅ III 1	16.54	20.99	68.15	84.71	83.96
b ₅ III 2	10.41	13.50	63.92	82.77	81.27
b ₅ III 3	17.32	19.01	65.26	84.45	84.48
b ₅ III 4	18.41	15.08	61.69	81.55	80.45
b ₅ III 5	16.91	15.57	58.02	78.77	79.41

Table S3. Wheat plant height estimated by random sampling (unit: cm).

	6 March	28 March	24 April	21 May	6 June
b ₁ I 1	11.00	39.53	79.48	88.68	88.30
b ₁ I 2	4.95	25.37	64.48	77.07	77.57
b ₁ I 3	5.43	22.92	59.30	74.34	74.34
b ₁ I 4	3.30	20.77	57.52	71.64	71.40
b ₁ I 5	4.58	16.87	57.14	73.14	60.79
b ₁ II 1	7.84	36.59	67.99	77.70	75.84
b ₁ II 2	7.79	28.32	56.33	67.89	68.06
b ₁ II 3	5.57	22.85	48.10	63.91	64.66
b ₁ II 4	4.15	21.01	46.39	63.78	64.43
b ₁ II 5	5.73	26.39	44.38	61.29	59.94
b ₁ III 1	8.75	40.19	80.86	94.66	74.17
b ₁ III 2	5.85	31.72	58.08	65.69	68.21
b ₁ III 3	5.93	27.61	54.55	28.61	21.09
b ₁ III 4	7.46	26.22	53.37	60.73	61.77
b ₁ III 5	7.26	24.49	52.25	40.24	30.33
b ₂ I 1	5.62	37.84	92.72	106.32	94.12
b ₂ I 2	6.88	38.72	75.35	92.14	91.20
b ₂ I 3	7.40	32.11	71.62	86.35	85.37
b ₂ I 4	6.68	32.15	75.11	84.71	85.74
b ₂ I 5	8.60	29.44	72.01	83.89	84.67
b ₂ II 1	10.43	39.85	74.64	83.97	83.99
b ₂ II 2	7.73	38.96	68.62	81.03	80.19
b ₂ II 3	13.28	36.59	64.80	78.08	79.86
b ₂ II 4	12.29	37.08	62.13	77.31	77.24
b ₂ II 5	8.22	29.04	57.34	70.64	72.08
b ₂ III 1	5.36	35.43	74.69	82.31	82.63
b ₂ III 2	5.71	37.87	70.25	80.02	80.01
b ₂ III 3	10.21	37.02	68.66	76.96	78.66
b ₂ III 4	13.50	37.82	69.35	78.90	78.36
b ₂ III 5	8.65	29.44	61.35	70.71	69.61
b ₃ I 1	2.92	-3.75	51.69	66.74	68.39
b ₃ I 2	1.71	-3.74	54.47	68.91	71.10
b ₃ I 3	3.41	0.56	57.75	72.30	74.92

b ₃ I 4	3.58	5.45	59.53	77.06	78.68
b ₃ I 5	2.69	1.38	59.97	75.38	80.63
b ₃ II 1	5.24	2.02	59.57	65.88	67.52
b ₃ II 2	7.83	2.75	55.69	68.83	70.83
b ₃ II 3	6.46	1.73	57.15	69.76	73.23
b ₃ II 4	9.53	3.91	55.96	73.81	77.10
b ₃ II 5	8.71	12.23	60.77	75.57	79.22
b ₃ III 1	9.68	5.92	59.00	71.69	73.21
b ₃ III 2	10.84	3.29	60.08	70.18	72.87
b ₃ III 3	7.71	0.94	59.94	70.07	72.86
b ₃ III 4	10.58	14.89	64.00	76.40	77.47
b ₃ III 5	10.42	18.21	65.15	77.27	79.92
b ₄ I 1	1.34	36.76	84.68	103.40	105.26
b ₄ I 2	3.22	34.45	85.90	104.91	103.35
b ₄ I 3	4.18	35.65	89.86	111.25	109.65
b ₄ I 4	4.76	33.74	91.66	113.41	110.73
b ₄ I 5	5.23	33.55	94.20	112.49	108.30
b ₄ II 1	1.98	41.35	91.03	108.25	107.34
b ₄ II 2	3.85	39.40	93.68	110.98	109.31
b ₄ II 3	2.37	38.31	90.67	109.64	106.68
b ₄ II 4	2.76	41.91	92.54	110.27	108.30
b ₄ II 5	4.47	38.06	92.05	108.64	106.78
b ₄ III 1	3.83	41.39	92.32	109.61	112.41
b ₄ III 2	5.21	42.04	97.82	113.79	115.40
b ₄ III 3	3.03	39.72	93.93	111.29	111.18
b ₄ III 4	5.09	43.85	97.26	114.27	111.66
b ₄ III 5	5.40	38.94	96.98	114.38	111.81
b ₅ I 1	4.18	10.01	61.94	82.36	80.26
b ₅ I 2	2.55	8.43	91.72	101.48	81.44
b ₅ I 3	10.49	7.69	60.09	81.38	82.18
b ₅ I 4	2.58	4.80	60.27	82.65	81.59
b ₅ I 5	2.03	5.66	57.83	78.88	78.22
b ₅ II 1	5.51	14.73	65.75	81.36	79.62
b ₅ II 2	3.92	10.65	59.63	76.89	76.15
b ₅ II 3	8.34	12.00	57.24	76.21	75.93
b ₅ II 4	4.42	9.27	56.75	76.47	76.72
b ₅ II 5	4.60	15.26	56.41	74.55	76.14
b ₅ III 1	3.30	11.54	63.50	86.37	80.94
b ₅ III 2	3.55	8.08	60.13	81.46	80.24
b ₅ III 3	9.32	14.45	61.08	85.08	82.60
b ₅ III 4	5.76	11.17	59.20	81.61	78.23
b ₅ III 5	4.38	15.29	55.12	77.65	76.24

Table S4. Wheat plant height estimated of sample 1 by equal interval sampling (unit: cm).

	6 March	28 March	24 April	21 May	6 June
b ₁ I 1	9.89	36.76	79.40	89.58	89.49
b ₁ I 2	6.24	24.56	63.26	76.65	76.63
b ₁ I 3	2.90	21.04	57.51	70.52	71.04
b ₁ I 4	4.91	17.70	53.63	72.14	72.37
b ₁ I 5	3.51	14.35	54.33	72.56	18.51
b ₁ II 1	6.71	36.98	66.45	76.50	76.44
b ₁ II 2	4.75	23.95	50.14	65.13	66.31
b ₁ II 3	4.12	22.72	46.15	64.49	66.40
b ₁ II 4	6.23	17.99	42.27	62.39	63.47
b ₁ II 5	5.97	31.46	44.47	59.62	48.33
b ₁ III 1	7.20	37.22	74.86	70.99	71.60
b ₁ III 2	8.19	29.72	60.46	66.96	69.51
b ₁ III 3	7.15	26.93	54.10	61.33	63.03
b ₁ III 4	7.78	25.84	53.32	61.09	63.11
b ₁ III 5	6.34	21.65	50.66	-5.85	-12.02
b ₂ I 1	3.57	32.16	92.04	89.57	89.88
b ₂ I 2	5.80	35.58	75.13	89.06	90.61
b ₂ I 3	6.73	34.14	74.54	87.57	89.54
b ₂ I 4	6.40	31.07	69.96	81.48	82.78
b ₂ I 5	8.18	30.33	70.03	85.45	86.98
b ₂ II 1	9.02	40.88	74.89	83.63	84.14
b ₂ II 2	10.71	37.15	67.03	78.94	80.25
b ₂ II 3	8.21	34.15	63.78	77.00	76.71
b ₂ II 4	5.97	31.97	58.63	72.46	72.79
b ₂ II 5	8.93	31.58	59.89	73.43	76.37
b ₂ III 1	3.93	33.84	73.09	80.16	80.91
b ₂ III 2	8.18	37.21	69.01	78.13	78.99
b ₂ III 3	10.88	36.64	65.85	76.24	76.96
b ₂ III 4	9.45	32.90	62.44	71.97	73.34
b ₂ III 5	5.02	30.18	60.25	69.84	72.23
b ₃ I 1	3.81	-3.04	54.52	67.13	70.19
b ₃ I 2	2.65	-1.33	57.37	70.89	74.41
b ₃ I 3	2.16	-2.62	59.07	72.96	75.10
b ₃ I 4	3.04	-0.04	59.03	75.14	76.60
b ₃ I 5	3.11	1.71	61.32	77.50	81.22
b ₃ II 1	5.03	-0.46	52.33	63.50	65.69
b ₃ II 2	5.49	1.90	55.94	67.33	70.89
b ₃ II 3	5.92	-0.43	56.26	69.08	70.38
b ₃ II 4	4.81	-0.28	51.66	72.25	74.89
b ₃ II 5	7.33	27.48	59.87	77.71	80.24
b ₃ III 1	10.51	6.67	58.53	72.66	72.73
b ₃ III 2	6.74	-0.16	57.20	67.76	71.17

b ₃ III3	6.61	-1.24	58.47	71.11	72.88
b ₃ III4	8.79	5.57	60.72	76.13	76.37
b ₃ III5	6.02	26.63	62.19	74.89	76.17
b ₄ I 1	2.52	33.31	69.97	97.05	100.95
b ₄ I 2	1.47	30.35	80.91	104.75	103.18
b ₄ I 3	3.02	31.41	84.08	105.39	102.86
b ₄ I 4	1.91	31.56	92.17	113.04	109.72
b ₄ I 5	2.30	29.47	85.23	107.28	104.52
b ₄ II 1	2.72	38.26	91.01	105.94	107.90
b ₄ II 2	2.48	36.83	91.27	110.62	107.63
b ₄ II 3	2.06	36.36	89.32	109.07	106.06
b ₄ II 4	1.97	34.78	90.37	110.04	107.99
b ₄ II 5	3.54	37.44	90.74	109.66	107.97
b ₄ III1	2.01	39.22	91.19	110.59	112.62
b ₄ III2	3.20	37.51	91.68	111.11	112.64
b ₄ III3	2.05	35.41	90.55	110.05	108.72
b ₄ III4	3.68	40.32	95.52	112.19	111.61
b ₄ III5	3.27	34.67	91.87	109.76	106.77
b ₅ I 1	1.59	6.39	60.60	79.97	80.33
b ₅ I 2	2.45	5.62	88.39	103.54	82.27
b ₅ I 3	2.99	4.77	60.32	82.10	82.60
b ₅ I 4	2.46	1.79	58.11	81.00	80.25
b ₅ I 5	2.57	-0.12	56.66	76.92	77.27
b ₅ II 1	5.62	13.04	59.77	76.62	74.71
b ₅ II 2	2.87	10.59	57.33	75.40	73.81
b ₅ II 3	3.40	9.35	56.55	75.25	76.24
b ₅ II 4	3.07	8.57	54.64	74.46	75.60
b ₅ II 5	2.25	14.45	52.04	70.53	71.18
b ₅ III1	3.08	8.19	61.09	79.02	78.74
b ₅ III2	4.29	6.46	59.38	81.67	80.39
b ₅ III3	5.77	10.42	57.23	80.19	79.58
b ₅ III4	4.65	12.28	54.94	78.81	79.62
b ₅ III5	3.16	10.81	51.84	78.80	77.35

Table S5. Wheat plant height estimated of sample 2 by equal interval sampling (unit: cm).

	6 March	28 March	24 April	21 May	6 June
b ₁ I 1	12.67	44.66	80.64	88.86	90.11
b ₁ I 2	5.84	27.12	64.34	78.76	79.26
b ₁ I 3	3.40	22.95	59.54	73.79	75.13
b ₁ I 4	4.61	18.68	55.64	72.44	62.04
b ₁ I 5	2.95	16.44	58.03	74.44	1.87
b ₁ II 1	6.75	34.59	62.91	73.08	73.39
b ₁ II 2	9.98	32.87	61.69	72.65	74.27
b ₁ II 3	4.64	21.70	47.14	62.68	64.30

b ₁ II 4	7.53	25.16	48.44	64.70	66.46
b ₁ II 5	5.65	23.63	44.46	60.07	58.98
b ₁ III 1	10.44	44.99	83.32	97.69	75.92
b ₁ III 2	6.88	30.65	58.24	66.96	67.97
b ₁ III 3	4.17	24.23	54.51	62.51	62.63
b ₁ III 4	6.84	14.78	52.36	54.45	57.45
b ₁ III 5	4.43	20.67	53.91	7.89	1.11
b ₂ I 1	5.52	36.33	90.14	98.30	92.23
b ₂ I 2	6.77	37.72	74.74	89.38	90.20
b ₂ I 3	4.96	35.02	73.93	89.35	83.74
b ₂ I 4	5.63	32.22	71.07	84.95	85.98
b ₂ I 5	6.48	29.11	69.90	82.52	85.13
b ₂ II 1	6.64	39.82	72.80	83.40	83.65
b ₂ II 2	9.52	40.65	67.63	80.33	81.17
b ₂ II 3	11.05	39.66	65.63	78.55	79.68
b ₂ II 4	12.68	39.45	66.87	80.44	80.05
b ₂ II 5	8.32	30.56	59.84	72.74	72.68
b ₂ III 1	4.63	34.11	74.08	80.85	81.91
b ₂ III 2	4.94	35.28	69.75	79.10	80.34
b ₂ III 3	12.35	39.03	68.40	76.68	79.42
b ₂ III 4	6.28	29.02	62.38	73.64	74.88
b ₂ III 5	6.61	29.43	62.57	71.40	73.22
b ₃ I 1	2.56	-4.06	51.17	65.87	68.36
b ₃ I 2	1.81	-4.97	52.18	68.39	71.15
b ₃ I 3	3.84	-1.44	57.74	73.15	76.01
b ₃ I 4	2.69	6.58	58.10	77.36	80.42
b ₃ I 5	3.49	2.38	60.79	76.14	80.03
b ₃ II 1	4.62	-0.23	51.97	64.96	67.68
b ₃ II 2	6.09	2.20	54.35	66.90	69.41
b ₃ II 3	5.19	1.18	55.50	68.69	71.37
b ₃ II 4	7.01	5.40	58.35	73.27	75.34
b ₃ II 5	8.46	4.98	61.94	76.30	79.06
b ₃ III 1	9.27	4.52	55.01	68.10	69.87
b ₃ III 2	9.20	2.71	58.14	70.59	71.40
b ₃ III 3	6.16	1.13	59.15	69.84	71.40
b ₃ III 4	11.55	9.48	64.64	77.27	78.92
b ₃ III 5	9.70	29.11	63.27	76.46	78.77
b ₄ I 1	2.57	34.06	84.80	105.35	105.41
b ₄ I 2	2.22	30.53	77.36	103.25	97.61
b ₄ I 3	4.48	33.37	91.79	114.63	111.66
b ₄ I 4	1.71	31.07	90.17	111.37	109.05
b ₄ I 5	3.88	31.81	91.23	112.03	108.66
b ₄ II 1	2.68	38.08	88.42	106.51	106.91
b ₄ II 2	3.70	37.56	92.01	112.79	108.78

b ₄ II 3	2.79	36.70	91.39	109.73	107.27
b ₄ II 4	2.09	38.75	91.21	109.09	107.36
b ₄ II 5	3.44	38.10	90.81	107.70	106.31
b ₄ III 1	2.65	40.07	89.22	109.67	122.64
b ₄ III 2	4.45	41.20	97.28	116.96	116.54
b ₄ III 3	2.45	36.17	94.43	111.34	111.09
b ₄ III 4	3.50	43.24	95.73	113.91	110.54
b ₄ III 5	2.85	34.38	90.56	109.40	105.93
b ₅ I 1	2.99	8.08	59.14	79.46	79.95
b ₅ I 2	2.74	5.53	72.82	105.24	80.01
b ₅ I 3	2.68	3.10	58.14	79.03	80.66
b ₅ I 4	1.92	3.24	59.54	82.09	80.50
b ₅ I 5	1.84	1.02	55.33	77.41	75.09
b ₅ II 1	6.56	14.23	64.61	80.13	79.95
b ₅ II 2	3.76	10.20	56.86	76.29	75.68
b ₅ II 3	2.94	6.20	55.15	74.30	74.33
b ₅ II 4	2.69	5.40	53.15	74.57	75.70
b ₅ II 5	3.36	14.74	55.21	73.22	73.40
b ₅ III 1	2.79	8.87	59.35	78.87	77.78
b ₅ III 2	2.98	5.57	58.53	80.46	79.79
b ₅ III 3	4.48	8.37	56.72	82.12	81.23
b ₅ III 4	6.55	8.34	57.28	81.72	77.67
b ₅ III 5	4.30	11.33	51.73	76.64	78.19

Table S6. Wheat plant height estimated of sample 3 by equal interval sampling (unit: cm).

	6 March	28 March	24 April	21 May	6 June
b ₁ I 1	7.12	35.08	75.35	85.18	84.57
b ₁ I 2	6.82	24.65	63.32	76.48	75.26
b ₁ I 3	4.27	18.87	53.33	71.10	71.36
b ₁ I 4	3.01	18.51	53.67	71.66	70.95
b ₁ I 5	5.83	16.67	55.18	73.89	73.44
b ₁ II 1	11.20	38.56	67.49	78.96	79.77
b ₁ II 2	8.21	26.84	53.88	69.23	70.29
b ₁ II 3	5.98	21.47	46.35	62.51	55.32
b ₁ II 4	9.37	21.73	45.34	64.88	66.58
b ₁ II 5	9.19	34.78	48.48	63.38	63.61
b ₁ III 1	9.57	39.05	78.47	72.18	73.15
b ₁ III 2	5.91	26.41	56.21	63.39	66.47
b ₁ III 3	12.82	28.53	60.87	39.55	30.62
b ₁ III 4	12.92	30.74	60.47	62.20	62.24
b ₁ III 5	7.10	21.25	50.32	46.70	52.98
b ₂ I 1	5.86	39.79	92.44	107.20	94.45
b ₂ I 2	6.75	37.46	77.35	92.18	90.56
b ₂ I 3	17.10	29.65	73.11	86.67	82.69

b ₂ I 4	6.81	29.95	69.18	81.55	82.37
b ₂ I 5	6.83	26.70	66.10	82.38	84.16
b ₂ II 1	9.38	41.96	75.28	86.16	86.38
b ₂ II 2	9.81	37.87	65.78	78.92	78.71
b ₂ II 3	15.69	35.47	64.97	77.74	79.07
b ₂ II 4	6.81	29.55	53.85	69.03	70.09
b ₂ II 5	8.68	29.24	57.32	70.62	71.32
b ₂ III 1	6.64	37.20	75.29	83.58	83.95
b ₂ III 2	5.19	36.63	68.58	77.03	75.78
b ₂ III 3	8.68	33.28	66.34	75.82	76.93
b ₂ III 4	12.30	34.75	66.55	73.50	71.28
b ₂ III 5	4.47	26.77	55.11	65.06	59.65
b ₃ I 1	1.97	-4.17	52.06	65.71	69.21
b ₃ I 2	2.06	-3.84	54.63	69.59	71.57
b ₃ I 3	4.71	-1.13	60.66	73.32	76.43
b ₃ I 4	4.35	15.67	58.18	75.00	76.90
b ₃ I 5	3.81	1.29	58.53	75.57	79.80
b ₃ II 1	4.55	0.28	52.98	63.99	65.87
b ₃ II 2	7.01	4.67	57.36	69.35	71.86
b ₃ II 3	5.75	-2.16	56.24	68.58	71.65
b ₃ II 4	7.07	1.70	56.42	72.95	74.50
b ₃ II 5	7.88	27.98	58.67	76.35	78.74
b ₃ III 1	9.51	4.99	59.45	72.59	71.94
b ₃ III 2	9.93	0.83	59.06	70.57	70.81
b ₃ III 3	6.30	0.37	57.36	68.90	69.95
b ₃ III 4	8.92	5.56	61.70	73.65	75.79
b ₃ III 5	8.30	8.47	64.27	76.89	78.06
b ₄ I 1	2.43	34.48	82.35	104.29	103.03
b ₄ I 2	3.10	33.75	85.50	107.38	106.64
b ₄ I 3	2.93	32.77	89.16	111.37	109.61
b ₄ I 4	2.52	33.88	92.40	113.30	108.88
b ₄ I 5	4.08	32.30	92.99	111.90	109.92
b ₄ II 1	2.46	40.57	91.52	107.19	107.28
b ₄ II 2	3.33	37.18	94.23	113.24	110.59
b ₄ II 3	3.22	48.59	91.39	109.60	108.49
b ₄ II 4	2.99	49.57	92.35	111.32	108.13
b ₄ II 5	4.35	38.42	89.46	108.83	105.81
b ₄ III 1	1.84	39.71	92.90	109.86	111.96
b ₄ III 2	4.69	40.21	95.94	115.59	114.81
b ₄ III 3	2.64	38.37	93.47	112.36	108.14
b ₄ III 4	4.61	56.80	97.08	114.75	110.84
b ₄ III 5	4.46	37.31	92.67	111.57	108.72
b ₅ I 1	2.43	9.35	62.46	81.79	80.59
b ₅ I 2	2.69	7.04	86.81	83.59	84.12

b ₅ I 3	20.89	16.31	59.13	80.62	80.59
b ₅ I 4	1.96	3.78	60.11	80.76	81.21
b ₅ I 5	2.25	3.27	58.59	81.50	77.41
b ₅ II 1	5.21	15.01	63.28	81.01	79.98
b ₅ II 2	3.82	10.93	57.81	77.00	76.05
b ₅ II 3	4.21	13.15	57.71	76.74	76.95
b ₅ II 4	2.78	7.87	55.30	74.02	74.67
b ₅ II 5	5.07	17.16	56.60	75.50	75.57
b ₅ III 1	3.00	10.55	61.03	80.19	80.92
b ₅ III 2	4.70	8.99	61.65	84.07	79.60
b ₅ III 3	14.66	18.13	62.04	83.54	82.51
b ₅ III 4	6.71	12.73	57.41	77.40	75.95
b ₅ III 5	6.04	15.59	55.21	78.83	78.09

Table S7. Wheat plant height estimated of sample 4 by equal interval sampling (unit: cm).

	6 March	28 March	24 April	21 May	6 June
b ₁ I 1	11.57	35.93	81.78	90.07	88.05
b ₁ I 2	10.50	31.84	70.95	83.30	82.44
b ₁ I 3	6.47	20.55	59.38	75.29	40.61
b ₁ I 4	3.93	16.32	57.89	73.34	73.95
b ₁ I 5	2.40	14.00	52.99	71.07	37.06
b ₁ II 1	13.23	45.08	71.79	81.47	81.29
b ₁ II 2	11.66	32.84	58.77	70.34	70.89
b ₁ II 3	5.25	22.13	45.53	64.63	65.86
b ₁ II 4	7.36	23.15	46.51	67.04	68.01
b ₁ II 5	5.20	28.86	42.31	61.33	61.93
b ₁ III 1	8.45	41.74	84.29	96.31	76.15
b ₁ III 2	6.43	29.85	58.43	67.10	68.08
b ₁ III 3	8.87	26.84	56.59	29.45	19.97
b ₁ III 4	11.05	26.25	55.06	60.61	64.22
b ₁ III 5	6.91	21.27	52.21	59.25	59.84
b ₂ I 1	5.05	39.09	95.15	108.38	92.72
b ₂ I 2	9.59	38.15	78.70	92.46	94.12
b ₂ I 3	3.90	32.38	69.67	84.77	85.15
b ₂ I 4	10.45	34.73	73.84	86.75	89.18
b ₂ I 5	6.10	24.76	67.62	81.99	85.17
b ₂ II 1	4.10	34.84	72.78	81.70	82.32
b ₂ II 2	7.30	38.57	70.06	80.57	81.48
b ₂ II 3	8.63	38.14	66.45	77.24	78.42
b ₂ II 4	6.55	33.90	59.78	72.67	73.11
b ₂ II 5	6.35	28.65	57.54	71.22	72.49
b ₂ III 1	5.02	37.28	77.50	85.10	85.10
b ₂ III 2	8.27	34.87	68.30	78.02	78.13
b ₂ III 3	9.53	38.55	66.02	75.61	76.08

b ₂ III4	18.21	41.57	74.28	83.36	82.76
b ₂ III5	5.51	27.39	60.08	69.89	73.17
b ₃ I 1	2.76	-3.23	51.66	66.74	68.48
b ₃ I 2	2.52	-2.58	55.98	68.69	71.10
b ₃ I 3	2.84	-2.64	56.23	70.21	73.84
b ₃ I 4	3.21	-1.87	59.29	75.58	77.84
b ₃ I 5	2.38	0.35	58.18	75.05	76.95
b ₃ II 1	3.14	1.44	53.08	63.95	65.85
b ₃ II 2	5.68	1.97	54.97	67.20	69.91
b ₃ II 3	5.54	0.75	55.20	69.39	72.54
b ₃ II 4	5.03	2.66	54.61	69.13	71.86
b ₃ II 5	6.91	5.69	59.14	74.03	77.23
b ₃ III1	6.42	1.65	54.20	70.55	71.09
b ₃ III2	10.21	2.27	57.09	70.50	71.23
b ₃ III3	5.19	0.86	55.28	67.88	70.02
b ₃ III4	6.88	15.77	60.00	73.03	73.94
b ₃ III5	7.82	17.60	63.42	77.63	73.93
b ₄ I 1	2.40	35.60	88.14	105.98	104.63
b ₄ I 2	2.56	33.40	87.88	107.55	106.87
b ₄ I 3	2.91	31.86	85.22	107.75	105.77
b ₄ I 4	4.36	38.73	91.82	112.89	111.82
b ₄ I 5	3.76	33.30	95.13	112.46	109.91
b ₄ II 1	2.91	40.43	89.65	108.00	107.67
b ₄ II 2	2.06	37.35	92.59	109.38	109.48
b ₄ II 3	1.76	34.42	89.11	109.49	105.59
b ₄ II 4	2.40	37.57	91.60	111.09	107.99
b ₄ II 5	4.83	38.90	93.72	109.47	108.38
b ₄ III1	2.95	41.92	94.11	110.58	113.51
b ₄ III2	3.19	39.27	94.30	111.30	112.84
b ₄ III3	2.33	35.65	92.71	111.90	109.98
b ₄ III4	3.57	41.91	95.99	114.73	113.29
b ₄ III5	3.86	37.50	96.86	113.73	111.33
b ₅ I 1	2.09	10.42	61.30	81.94	80.79
b ₅ I 2	3.10	7.89	86.35	106.60	82.94
b ₅ I 3	2.23	5.73	60.69	82.38	81.98
b ₅ I 4	2.94	3.01	59.72	81.86	82.67
b ₅ I 5	2.62	3.16	59.05	79.80	79.47
b ₅ II 1	3.94	13.25	64.21	81.77	79.18
b ₅ II 2	3.20	10.60	58.26	77.23	75.57
b ₅ II 3	3.50	15.38	59.03	77.67	77.31
b ₅ II 4	3.40	4.72	54.89	73.69	74.98
b ₅ II 5	5.27	13.86	55.11	74.98	76.28
b ₅ III1	3.68	11.62	64.33	78.96	82.66
b ₅ III2	2.96	6.37	59.56	81.39	80.41

b ₅ III3	6.00	11.50	61.51	83.96	83.50
b ₅ III4	6.33	12.97	59.30	81.88	82.60
b ₅ III5	4.67	14.56	54.05	76.23	75.04

Table S8. Wheat plant height estimated of sample 5 by equal interval sampling (unit: cm).

	6 March	28 March	24 April	21 May	6 June
b ₁ I 1	8.78	39.28	83.24	90.26	92.47
b ₁ I 2	6.02	29.72	66.68	79.60	73.45
b ₁ I 3	4.59	23.06	59.45	74.97	68.32
b ₁ I 4	4.27	17.70	56.33	72.06	74.66
b ₁ I 5	3.29	15.15	53.62	72.56	7.37
b ₁ II 1	8.30	38.69	69.48	79.77	81.02
b ₁ II 2	11.08	32.49	60.95	72.56	71.67
b ₁ II 3	3.91	22.56	48.11	65.15	66.06
b ₁ II 4	6.92	21.57	46.74	62.83	65.37
b ₁ II 5	5.32	15.79	42.40	58.39	59.13
b ₁ III1	7.26	39.80	70.09	75.07	75.52
b ₁ III2	8.06	35.75	61.85	65.75	69.26
b ₁ III3	4.91	25.94	54.03	13.55	8.93
b ₁ III4	8.15	24.86	56.07	60.62	59.94
b ₁ III5	9.73	23.19	56.21	59.94	57.20
b ₂ I 1	4.27	37.80	95.86	105.77	92.61
b ₂ I 2	5.35	39.85	76.78	90.68	92.24
b ₂ I 3	5.44	32.66	68.49	84.60	80.73
b ₂ I 4	5.94	32.96	72.74	84.83	86.13
b ₂ I 5	3.89	26.22	64.77	80.56	81.24
b ₂ II 1	5.57	39.66	76.16	84.24	83.89
b ₂ II 2	4.52	34.88	66.27	78.86	80.59
b ₂ II 3	8.80	34.78	60.94	74.02	73.31
b ₂ II 4	10.94	32.54	58.52	73.28	70.81
b ₂ II 5	5.76	26.42	53.58	67.54	67.15
b ₂ III1	3.68	36.93	75.87	82.33	82.47
b ₂ III2	6.70	33.59	69.56	78.35	79.09
b ₂ III3	7.30	33.99	66.75	76.07	76.73
b ₂ III4	6.97	29.06	62.42	74.01	71.81
b ₂ III5	6.11	25.69	62.08	74.16	75.57
b ₃ I 1	2.79	-3.62	50.90	65.92	68.18
b ₃ I 2	2.56	-1.93	57.45	69.78	73.03
b ₃ I 3	2.48	-3.77	57.39	71.93	74.14
b ₃ I 4	3.14	-2.15	57.24	73.44	75.87
b ₃ I 5	3.07	0.44	60.25	75.61	79.35
b ₃ II 1	3.07	-0.15	54.19	66.56	68.12
b ₃ II 2	6.40	2.71	55.87	68.27	70.02
b ₃ II 3	5.76	0.95	56.40	67.34	70.66

b ₃ II 4	6.03	2.23	54.42	69.49	72.33
b ₃ II 5	5.68	1.66	55.82	71.28	74.14
b ₃ III 1	6.14	3.10	55.37	69.50	71.33
b ₃ III 2	8.67	2.39	56.48	69.22	70.11
b ₃ III 3	3.13	1.29	52.93	63.94	65.95
b ₃ III 4	7.60	4.37	61.19	73.96	71.78
b ₃ III 5	8.37	13.08	62.89	76.53	77.49
b ₄ I 1	1.78	35.93	90.83	108.50	108.96
b ₄ I 2	4.05	35.99	91.74	113.57	112.31
b ₄ I 3	2.93	32.33	87.68	108.91	106.40
b ₄ I 4	4.97	35.18	92.88	113.29	109.47
b ₄ I 5	3.58	31.86	92.05	110.21	108.28
b ₄ II 1	3.24	43.58	93.45	109.16	110.30
b ₄ II 2	2.10	40.03	89.98	107.44	107.99
b ₄ II 3	2.12	38.31	93.64	109.62	107.08
b ₄ II 4	1.99	36.82	90.82	108.92	105.54
b ₄ II 5	3.97	50.12	92.64	108.91	106.78
b ₄ III 1	2.59	43.36	93.98	111.42	112.21
b ₄ III 2	4.32	41.35	96.56	113.39	110.47
b ₄ III 3	4.02	38.41	93.06	113.38	108.41
b ₄ III 4	4.02	42.56	93.10	112.92	105.74
b ₄ III 5	4.96	44.54	95.55	114.49	105.71
b ₅ I 1	1.74	10.25	59.75	79.54	77.53
b ₅ I 2	1.71	6.11	62.34	83.10	83.52
b ₅ I 3	3.09	5.56	61.19	83.08	83.59
b ₅ I 4	3.14	3.10	58.09	80.96	82.64
b ₅ I 5	3.78	4.11	57.42	79.16	80.00
b ₅ II 1	4.22	13.54	64.72	79.47	78.53
b ₅ II 2	4.09	11.45	59.50	76.33	75.08
b ₅ II 3	3.84	12.04	58.17	78.59	78.38
b ₅ II 4	2.19	7.70	56.76	74.77	75.41
b ₅ II 5	5.38	9.43	53.09	73.20	74.86
b ₅ III 1	3.03	12.27	66.15	83.77	84.36
b ₅ III 2	3.07	6.60	58.62	81.96	79.68
b ₅ III 3	7.02	17.82	62.96	84.54	85.94
b ₅ III 4	5.66	13.20	57.74	83.01	88.20
b ₅ III 5	4.70	13.65	55.44	78.73	79.06

Table S9. Heading dates obtained by experts and estimated by sampling methods 1, 2, and 3.

Plot	Reference heading date	Estimated heading date (sampling method 1)	Estimated heading date (sampling method 2)	Estimated heading date (sampling method 3)
b ₁ I 1	20 April	16 April	16 April	16 April
b ₁ I 2	21 April	19 April	22 April	21 April

b ₁ I 3	22 April	22 April	25 April	24 April
b ₁ I 4	23 April	22 April	24 April	25 April
b ₁ I 5	23 April	24 April	20 April	28 April
b ₁ II 1	20 April	13 April	14 April	15 April
b ₁ II 2	22 April	20 April	21 April	23 April
b ₁ II 3	22 April	25 April	29 April	29 April
b ₁ II 4	23 April	27 April	01 May	05 May
b ₁ II 5	23 April	25 April	28 April	28 April
b ₁ III 1	12 April	11 April	11 April	09 April
b ₁ III 2	12 April	16 April	15 April	16 April
b ₁ III 3	14 April	16 April	27 March	18 April
b ₁ III 4	16 April	18 April	18 April	18 April
b ₁ III 5	17 April	18 April	03 April	16 April
b ₂ I 1	23 April	13 April	14 April	11 April
b ₂ I 2	23 April	17 April	20 April	19 April
b ₂ I 3	24 April	19 April	21 April	20 April
b ₂ I 4	24 April	20 April	18 April	21 April
b ₂ I 5	26 April	20 April	21 April	24 April
b ₂ II 1	21 April	16 April	15 April	14 April
b ₂ II 2	21 April	19 April	16 April	17 April
b ₂ II 3	23 April	21 April	23 April	20 April
b ₂ II 4	23 April	23 April	23 April	21 April
b ₂ II 5	23 April	24 April	24 April	23 April
b ₂ III 1	16 April	16 April	14 April	13 April
b ₂ III 2	17 April	15 April	14 April	15 April
b ₂ III 3	17 April	17 April	16 April	17 April
b ₂ III 4	19 April	19 April	17 April	18 April
b ₂ III 5	19 April	20 April	18 April	18 April
b ₃ I 1	23 April	25 April	25 April	25 April
b ₃ I 2	23 April	24 April	25 April	25 April
b ₃ I 3	23 April	24 April	25 April	25 April
b ₃ I 4	23 April	25 April	26 April	25 April
b ₃ I 5	25 April	26 April	25 April	25 April
b ₃ II 1	22 April	24 April	21 April	24 April
b ₃ II 2	22 April	24 April	24 April	24 April
b ₃ II 3	23 April	24 April	24 April	25 April
b ₃ II 4	23 April	28 April	27 April	25 April
b ₃ II 5	23 April	01 May	26 April	26 April
b ₃ III 1	21 April	29 April	24 April	24 April
b ₃ III 2	21 April	25 April	23 April	24 April
b ₃ III 3	21 April	23 April	23 April	24 April
b ₃ III 4	22 April	28 April	24 April	23 April
b ₃ III 5	22 April	26 April	24 April	23 April
b ₄ I 1	24 April	19 April	22 April	23 April

b ₄ I 2	24 April	22 April	21 April	23 April
b ₄ I 3	24 April	22 April	22 April	23 April
b ₄ I 4	24 April	21 April	22 April	21 April
b ₄ I 5	24 April	21 April	20 April	21 April
b ₄ II 1	23 April	18 April	18 April	19 April
b ₄ II 2	23 April	19 April	19 April	20 April
b ₄ II 3	23 April	19 April	19 April	19 April
b ₄ II 4	23 April	19 April	18 April	19 April
b ₄ II 5	23 April	20 April	19 April	18 April
b ₄ III 1	23 April	19 April	20 April	21 April
b ₄ III 2	23 April	19 April	19 April	20 April
b ₄ III 3	23 April	20 April	19 April	20 April
b ₄ III 4	23 April	17 April	17 April	17 April
b ₄ III 5	23 April	18 April	19 April	19 April
b ₅ I 1	29 April	29 April	26 April	26 April
b ₅ I 2	29 April	07 April	06 April	16 April
b ₅ I 3	30 April	29 April	28 April	29 April
b ₅ I 4	30 April	29 April	27 April	27 April
b ₅ I 5	01 May	27 April	27 April	26 April
b ₅ II 1	02 May	27 April	23 April	24 April
b ₅ II 2	28 April	27 April	25 April	26 April
b ₅ II 3	28 April	30 April	28 April	27 April
b ₅ II 4	29 April	02 May	27 April	27 April
b ₅ II 5	29 April	02 May	28 April	28 April
b ₅ III 1	27 April	28 April	26 April	26 April
b ₅ III 2	27 April	26 April	27 April	27 April
b ₅ III 3	28 April	01 May	29 April	29 April
b ₅ III 4	28 April	02 May	27 April	29 April
b ₅ III 5	29 April	05 May	30 April	01 May

Table S10. Estimated heading date of equal interval sampling. Diagonal lines in the table represent abnormal growth curves (severe lodging and sharp drop in plant height) and the excluded data that could not be used to determine the heading dates.

	reference	sample_1	sample_2	sample_3	sample_4	sample_5	average
b ₁ I 1	20 April	17 April	14 April	16 April	16 April	15 April	16 April
b ₁ I 2	21 April	23 April	23 April	22 April	21 April	17 April	21 April
b ₁ I 3	22 April	23 April	24 April	28 April	/	21 April	24 April
b ₁ I 4	23 April	29 April	21 April	27 April	25 April	27 April	25 April
b ₁ I 5	23 April	/	/	28 April	/	/	28 April
b ₁ II 1	20 April	14 April	16 April	18 April	13 April	16 April	15 April
b ₁ II 2	22 April	27 April	20 April	27 April	21 April	20 April	23 April
b ₁ II 3	22 April	03 May	29 April	24 April	04 May	29 April	29 April
b ₁ II 4	23 April	07 May	01 May	08 May	06 May	03 May	05 May
b ₁ II 5	23 April	/	28 April	22 April	02 May	02 May	28 April

b1III1	12 April	07 April	/	08 April	10 April	10 April	09 April
b1III2	12 April	17 April	17 April	19 April	17 April	11 April	16 April
b1III3	14 April	18 April	18 April	/	/	/	18 April
b1III4	16 April	20 April	17 April	14 April	21 April	16 April	18 April
b1III5	17 April	/	/	13 April	20 April	16 April	16 April
b2 I 1	23 April	07 April	13 April	14 April	12 April	11 April	11 April
b2 I 2	23 April	20 April	20 April	19 April	20 April	18 April	19 April
b2 I 3	24 April	20 April	17 April	23 April	21 April	20 April	20 April
b2 I 4	24 April	20 April	21 April	21 April	22 April	19 April	21 April
b2 I 5	26 April	24 April	22 April	25 April	24 April	24 April	24 April
b2 II 1	21 April	14 April	14 April	15 April	15 April	12 April	14 April
b2 II 2	21 April	19 April	17 April	18 April	15 April	18 April	17 April
b2 II 3	23 April	20 April	19 April	24 April	16 April	19 April	20 April
b2 II 4	23 April	21 April	19 April	25 April	19 April	22 April	21 April
b2 II 5	23 April	24 April	22 April	24 April	23 April	24 April	23 April
b2III1	16 April	14 April	14 April	14 April	13 April	11 April	13 April
b2III2	17 April	15 April	15 April	12 April	17 April	16 April	15 April
b2III3	17 April	18 April	16 April	18 April	15 April	16 April	17 April
b2III4	19 April	19 April	20 April	15 April	17 April	19 April	18 April
b2III5	19 April	18 April	18 April	15 April	21 April	22 April	18 April
b3 I 1	23 April	25 April	25 April	25 April	25 April	25 April	25 April
b3 I 2	23 April	25 April	25 April	25 April	25 April	25 April	25 April
b3 I 3	23 April	25 April	/	25 April	25 April	25 April	25 April
b3 I 4	23 April	25 April	27 April	27 April	25 April	25 April	25 April
b3 I 5	25 April	25 April	25 April	26 April	25 April	25 April	25 April
b3 II 1	22 April	24 April	25 April	24 April	24 April	25 April	24 April
b3 II 2	22 April	24 April	24 April	24 April	24 April	24 April	24 April
b3 II 3	23 April	25 April	24 April	25 April	25 April	24 April	25 April
b3 II 4	23 April	25 April	25 April	25 April	25 April	25 April	25 April
b3 II 5	23 April	29 April	24 April	29 April	25 April	25 April	26 April
b3III1	21 April	24 April	24 April	23 April	25 April	25 April	24 April
b3III2	21 April	24 April	23 April	23 April	24 April	24 April	24 April
b3III3	21 April	25 April	/	24 April	24 April	24 April	24 April
b3III4	22 April	24 April	23 April	23 April	24 April	22 April	23 April
b3III5	22 April	23 April	24 April	23 April	23 April	24 April	23 April
b4 I 1	24 April	01 May	23 April	23 April	20 April	20 April	23 April
b4 I 2	24 April	25 April	25 April	23 April	22 April	22 April	23 April
b4 I 3	24 April	23 April	23 April	23 April	24 April	22 April	23 April
b4 I 4	24 April	21 April	22 April	21 April	22 April	21 April	21 April
b4 I 5	24 April	23 April	22 April	21 April	20 April	21 April	21 April
b4 II 1	23 April	19 April	20 April	18 April	20 April	17 April	19 April
b4 II 2	23 April	20 April	21 April	20 April	19 April	19 April	20 April
b4 II 3	23 April	20 April	20 April	16 April	21 April	18 April	19 April
b4 II 4	23 April	21 April	19 April	15 April	20 April	19 April	19 April

b ₄ II 5	23 April	20 April	19 April	20 April	18 April	14 April	18 April
b ₄ III 1	23 April	21 April	27 April	20 April	19 April	18 April	21 April
b ₄ III 2	23 April	22 April	20 April	21 April	20 April	18 April	20 April
b ₄ III 3	23 April	21 April	20 April	19 April	20 April	20 April	20 April
b ₄ III 4	23 April	19 April	18 April	11 April	19 April	17 April	17 April
b ₄ III 5	23 April	20 April	20 April	20 April	19 April	16 April	19 April
b ₅ I 1	29 April	26 April	27 April	26 April	27 April	26 April	26 April
b ₅ I 2	29 April	/	/	02 April	19 April	26 April	16 April
b ₅ I 3	30 April	27 April	27 April	09 May	27 April	27 April	29 April
b ₅ I 4	30 April	27 April	27 April	26 April	27 April	27 April	27 April
b ₅ I 5	01 May	25 April	26 April	26 April	26 April	27 April	26 April
b ₅ II 1	02 May	25 April	24 April	25 April	24 April	23 April	24 April
b ₅ II 2	28 April	26 April	27 April	27 April	26 April	25 April	26 April
b ₅ II 3	28 April	27 April	27 April	27 April	27 April	28 April	27 April
b ₅ II 4	29 April	28 April	28 April	27 April	27 April	26 April	27 April
b ₅ II 5	29 April	29 April	27 April	28 April	29 April	29 April	28 April
b ₅ III 1	27 April	25 April	26 April	27 April	25 April	25 April	26 April
b ₅ III 2	27 April	27 April	27 April	26 April	27 April	27 April	27 April
b ₅ III 3	28 April	29 April	29 April	02 May	28 April	29 April	29 April
b ₅ III 4	28 April	01 May	28 April	28 April	29 April	03 May	29 April
b ₅ III 5	29 April	02 May	03 May	01 May	30 April	01 May	01 May

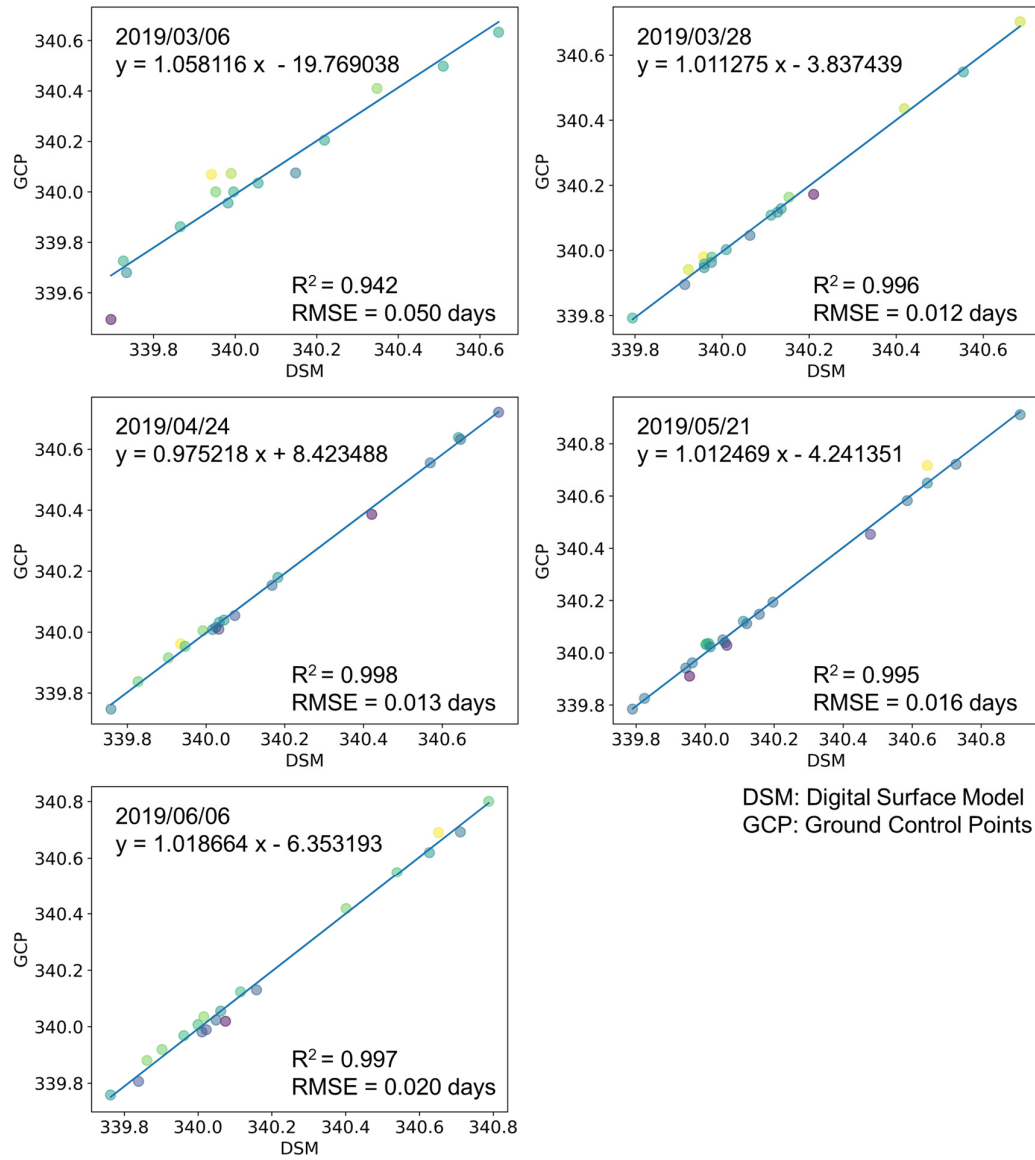


Figure S1: value correction of Digital Surface Model