Grain dehydration rate is related to post-silking thermal time and the ear characters in different maize hybrids

Appendix information

Appendix A Details of the maize hybrids used in the research

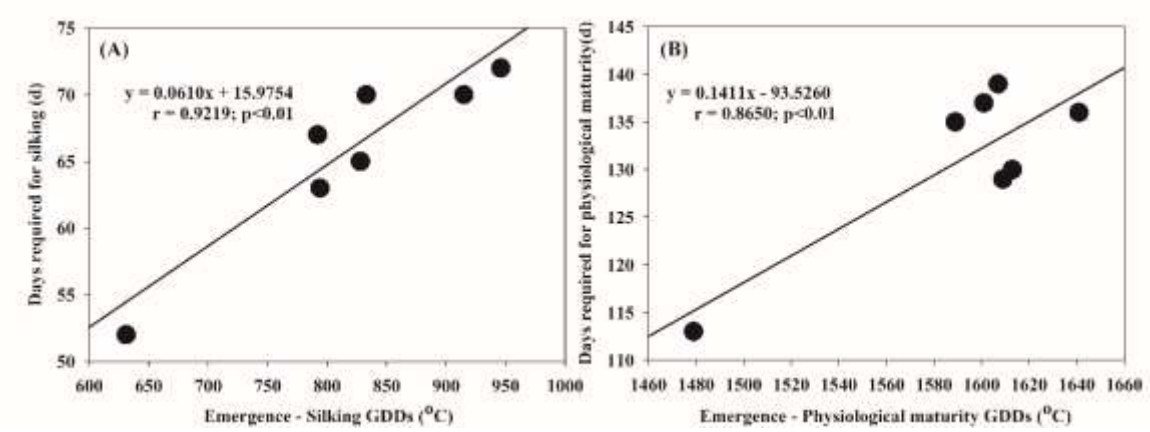
Hybrids	Breeding institution	Total >10^{o}C Thermal time requirement as introduced by the breeder (^{o}C)
LS1	Jiaozuo Wonderful Agricultural Technology Co., Lid., Henan Province	Unknown
ZD958	Henan Academy of Agricultural Science, Henan province	2750-3100
XY335	Tieling Pioneer Seed Research Co., Ltd., Liaoning province	2680-2800
JQ202	Jilin Jinqing Seed Industry Co., Ltd., Jilin province	2650-2750
DMY1	German KWS Seed Co., Ltd., Germany	2100-2200

Appendix B Growth stage of different maize hybrids in 2017 and 2018

Hybrid	Emergence (month / day)		Silking stage (month / day)		Physiological maturity (month / day)		Emergence-Silking (d)		Silking-Physiological maturity (d)	
	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018
LS1	5/12	5/15	7/18	7/26	9/28	9/28	67	72	72	64
ZD958	5/12	5/15	7/21	7/24	9/26	9/28	70	70	67	66
XY335	5/12	5/15	7/18	7/19	9/24	9/22	67	65	68	65
JQ202	——	5/15	——	7/17	——	9/21	——	63	——	66
DMY1	——	5/15	——	7/6	——	9/5	——	52	——	61

Note: Emergence, silking and physiological maturity dates were not affected by planting densities.

Appendix C The correlation between GDDs and days required for silking (A) and days required for physiological maturity (B)



Appendix D ANOVA results (F-values) for the grain yield and grain moisture harvest

Year	Source	DF	Grain yield (kg ha^{-1})	Grain moisture at harvest (%)
2017	Block (B)	2	0.92^{ns}	0.03^{ns}
	Density (D)	1	2.58^{ns}	1.42^{ns}
	Hybrid (H)	2	2.88^{ns}	120.03^{**}
	D × H	2	1.45^{ns}	0.68^{ns}
2018	Block (B)	2	1.99^{ns}	1.98^{ns}
	Density (D)	1	2.02^{ns}	0.35^{ns}
	Hybrid (H)	4	49.35^{**}	317.20^{**}
	D × H	4	0.99^{ns}	1.58^{ns}

** denotes significant difference at the 0.01 probability level. ns denotes no significant difference at the 0.05 probability level.

Appendix E ANOVA results (F-values) for the parameters related to mechanized grain harvest quality

Source of variation	DF	Damaged-grain ratio (%)	Grain impurity ratio (%)	Grain loss ratio (%)
Planting density (D)	1	3.09^{ns}	0.53^{ns}	0.86^{ns}
Hybrid (H)	4	20.10^{**}	6.92^{**}	3.56^{*}
Harvest time (T)	2	157.70^{**}	27.43^{**}	0.54^{ns}
D×H	4	6.00^{**}	1.49^{ns}	3.22^{*}
D×T	2	3.23^{*}	0.48^{ns}	1.27^{ns}
H×T	8	2.05^{**}	2.42^{*}	2.31^{*}
D×H×T	8	1.41^{**}	1.17^{ns}	4.58^{**}

* and ** denote significant difference at the 0.05 and 0.01 probability level respectively. ns denotes no significant difference at the 0.05 probability level.