

**Table S6.** Associations between palmitic acid related traits and polymorphism sites of *Zmfatb* at three environments in CAM155.

Site	Features		Environments	2006 Beijing		2007 Beijing		2007 Hainan		$R^2$ (%)	$P$ Value
				Traits	ALL <sup>a</sup>	EHOL <sup>b</sup>	ALL	EHOL	ALL	EHOL	2007HN
S_752	Location	promoter	C16:0	1.50E-04	n.s.	1.30E-03	n.s.	1.43E-04	n.s.	11	3.00E-04
	Genotype	C/G	C16:0/ALL	4.03E-05	7.49E-04	1.30E-03	7.56E-04	1.38E-04	3.90E-03	13	6.60E-05
	Frequency(%)	36/64	SFA/ALL	2.64E-04	2.80E-03	5.60E-03	3.87E-04	1.28E-04	2.20E-03	15	1.38E-05
	AA Change	no	UFA/ALL	5.19E-04	4.60E-03	5.60E-03	3.87E-04	1.51E-04	2.30E-03	15	1.66E-05
			SFA/UFA	5.43E-04	3.60E-03	7.90E-03	4.59E-04	2.58E-04	2.60E-03	13	1.08E-04
S_768	Location	promoter	C16:0	4.23E-04	n.s.	5.00E-03	n.s.	6.73E-04	n.s.	15	7.54E-05
	Genotype	2/4/0	C16:0/ALL	1.68E-04	2.40E-03	5.60E-03	3.20E-03	4.44E-04	2.00E-03	22	7.73E-07
	Frequency(%)	40/35/25	SFA/ALL	1.30E-03	1.01E-02	n.s.	2.30E-03	4.11E-04	7.74E-04	24	2.58E-07
	AA Change	no	UFA/ALL	2.20E-03	1.63E-02	n.s.	2.30E-03	5.08E-04	9.34E-04	23	3.49E-07
			SFA/UFA	2.20E-03	1.63E-02	n.s.	2.30E-03	5.08E-04	9.34E-04	23	3.49E-07
S_4294	Location	exon6	C16:0	2.50E-06	1.20E-05	3.14E-05	3.53E-05	3.09E-06	5.55E-05	11	1.11E-03
	Genotype	0/11	C16:0/ALL	2.09E-09	1.07E-07	1.10E-08	8.71E-09	4.69E-09	1.66E-07	25	1.47E-07
	Frequency(%)	32/68	SFA/ALL	2.94E-07	1.01E-05	6.87E-07	3.72E-08	2.17E-08	1.30E-06	27	6.47E-08
	AA Change	yes	UFA/ALL	7.96E-06	7.78E-05	6.87E-07	3.72E-08	2.91E-08	1.62E-06	26	8.00E-08
			SFA/UFA	7.96E-06	7.78E-05	6.87E-07	3.72E-08	5.22E-08	1.62E-06	23	8.00E-08

<sup>a</sup> includes 155 elite inbred lines in the Chinese Association Mapping Panel (CAM155). <sup>b</sup> excludes the 34 high-oil lines from the Chinese Association Mapping Panel (CAM155). The abbreviations of traits can be found in Table S2.