

## Aberystwyth University

### *Characterization of chilling-shock responses in four genotypes of Miscanthus reveals the superior tolerance of M. x giganteus compared with M. sinensis and M. sacchariflorus*

Purdy, Sarah Jane; Maddison, Anne Louise; Jones, Laurence Edmund; Webster, Richard John; Andralojc, John; Donnison, Iain Simon; Clifton-Brown, John Cedric

*Published in:*  
Annals of Botany

*DOI:*  
[10.1093/aob/mct059](https://doi.org/10.1093/aob/mct059)

*Publication date:*  
2013

*Citation for published version (APA):*  
Purdy, S. J., Maddison, A. L., Jones, L. E., Webster, R. J., Andralojc, J., Donnison, I. S., & Clifton-Brown, J. C. (2013). Characterization of chilling-shock responses in four genotypes of Miscanthus reveals the superior tolerance of M. x giganteus compared with M. sinensis and M. sacchariflorus. *Annals of Botany*, 111(5), 999-1013. <https://doi.org/10.1093/aob/mct059>

#### **Document License** CC BY

#### **General rights**

Copyright and moral rights for the publications made accessible in the Aberystwyth Research Portal (the Institutional Repository) are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the Aberystwyth Research Portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the Aberystwyth Research Portal

#### **Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

tel: +44 1970 62 2400  
email: [is@aber.ac.uk](mailto:is@aber.ac.uk)

## SUPPLEMENTARY DATA

TABLE S1. Temperature changes during daylight hours in May 2010 at Aberystwyth, UK. Temperatures (°C) were measured by a weather station (Campbell Scientific, CR1000 data-logger) at a height of 20 cm above ground. Daylengths in the period shown are 15h 37min – 16h 11min of light, with sunrise at 05:24–05:11 and sunset at 21:01–21:17.

Date	Maximum temperature	Temperature at sunset	Average daylight temperature	Temperature change 12:00–18:00	Maximum temperature decrease
16/05/2010	14	8	12	0	–6
17/05/2010	15	6	12	–2	–9
18/05/2010	17	12	14	–2	–5
19/05/2010	16	14	13	+2	–2
20/05/2010	20	13	16	–4	–7
21/05/2010	23	15	19	–3	–10
22/05/2010	28	14	21	–8	–14
23/05/2010	24	13	20	–3	–11
24/05/2010	20	11	16	–4	–9
25/05/2010	23	13	17	–6	–9
26/05/2010	16	10	13	–3	–6
27/05/2010	14	10	11	–2	–4
28/05/2010	16	11	13	–2	–5
29/05/2010	15	11	12	–1	–4
30/05/2010	14	9	12	–2	–5
31/05/2010	21	13	16	–4	–8

TABLE S2. List of primer sequences. Primers were designed using the NCBI primer design software (National Centre for Biotechnology Information, US National Library of Medicine).

Gene name	Sequence from	Primer name	Primer sequence	Approximate product size
<i>MsYLS8</i>	Maize	Zm_YLS8_F3	CATGCAGATGGATGAAGTGC	152
	GI:219885073	Zm_YLS8_R3	CGAGATCAATCATGATGTGC	
<i>MsRD19a</i>	Sorghum	Sb_RD19A_F2	TGTGCAGCGGTTTCGGCAAGT	192
	GI:242074048	Sb_RD19A_R2	CGCGCCGTGACTTACGGAGG	
<i>MsPGM1</i>	Sorghum	Sb_PGM_F3	CGCCCAGGCGCTCAAGATCA	200
	GI:242058041	Sb_PGM_R3	AGTACCGGCCATCACCCCA	
<i>MsBAM3</i>	Maize	Zm_BAM3_F2	TGGCCGGCGAGAACGCGCTG	209
	GI:195615574	Zm_BAM3_R2	CATGCGCAGGTACGTGAA	
<i>MsCBF3</i>	Maize	Zm_CBF3_F6	AGCGCAATGTGGGAGGTTCC	171
	GI:226507144	Zm_CBF3_R6	GGTCGATGAGCATCCCCTGCG	