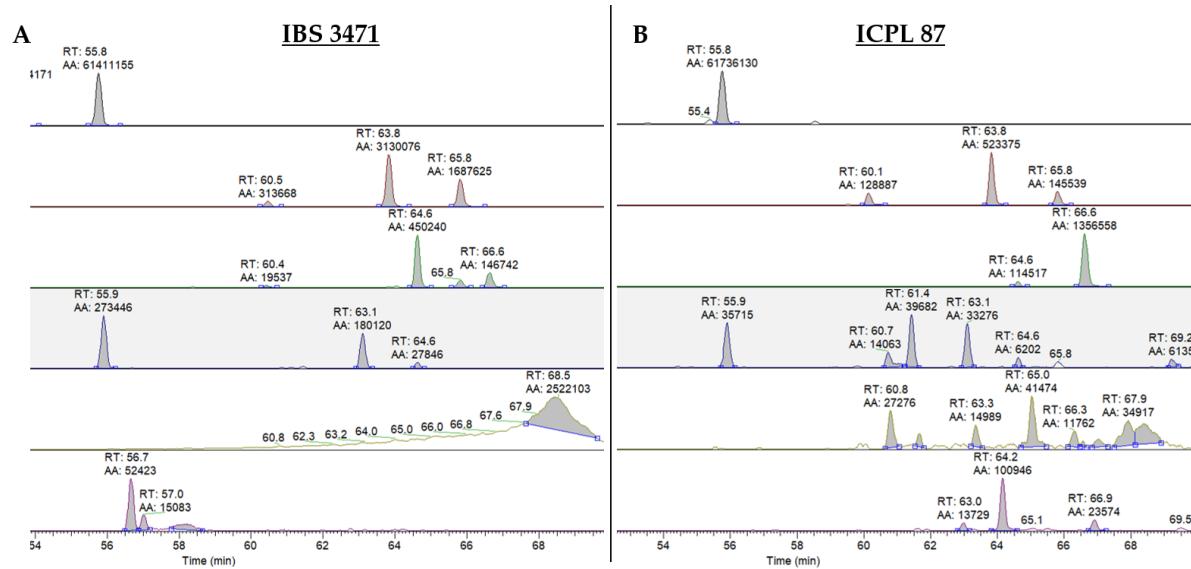


**Supplementary Figure S1.** Post-normalised data showing variability in the TMT-MS data. **(A)** Density plot and **(B)** Box plots of all identified proteins. ICPL 87 at flowering/podding stage [replication 3] was used as reference ratio across all samples.



**Supplementary Figure S2.** LCMS zoomed chromatogram of identified flavonoids compounds. **(A)** IBS 3471 chromatograms and **(B)** ICPL 87 chromatograms.

**Supplementary Table S2.** List of primers used for qRT-PCR in the study

Pathway	Gene ID	Primer type	Primer sequence 5' - 3'	Amplicon size (bp)	Source	
General Phenylpropanoid pathway	Phenylalanine ammonia-lyase (PAL)	F-	CTTGCCTTGTGAATGGCAC	92	This study	
		R-	AKAACTTCAGACAAGACAGC			
	Cinnamate 4-hydroxylase (C4H)	F-	CTCCTCCTGGCCTCAACAAG	100		
		R-	AACGACCTTGGCTTGCAAC			
	4-Coumaroyl-CoA ligase (4CL)	F-	TGGTGGCTCTGACGAAAGAC	97		
		R-	AAGACTTCCTTCCCAGCGG			
	Flavonol biosynthesis	F-	GAYGAGATGAGAAGGTGGTC	95		
		R-	GTYAAKCCAGGGCCAACCC			
Monolignols biosynthesis	Chalcone synthase (CHS)	F-	TCAACTACGACATGTGGCC	123	Sinha et al. 2015	
		R-	CCAACCTTAACCCCTCGGAC			
	Flavonol synthase (FLS)	F-	GCTCCTCTACTATGCGCAGG			
		R-	AGCTATGTGTCCAAGCCAC			
House Keeping Genes (Reference genes)	Initiation factor 4α	F-	GCCGAGATCACACAGTCTCA	95	Sinha et al. 2015	
		R-	ACCACGAGCCAAAGATCAG			
	Actin 11	F-	GGCATACATTGCCCTTGACT	97		
		R-	GAACCTCGGGACATCTGAAA			