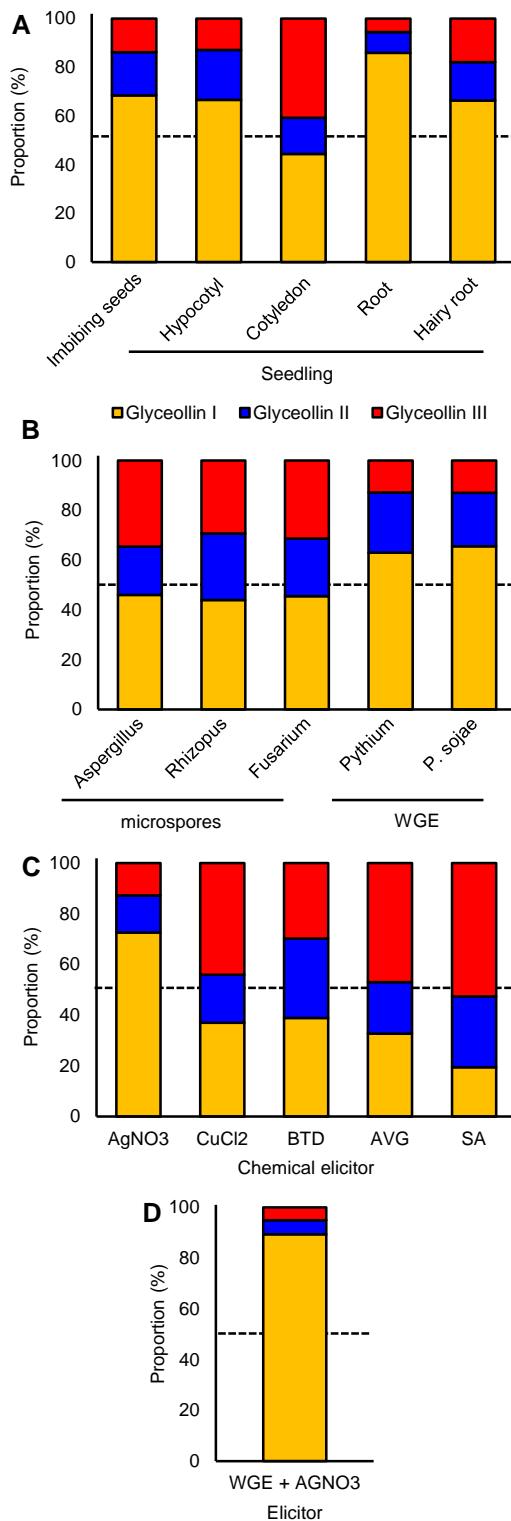
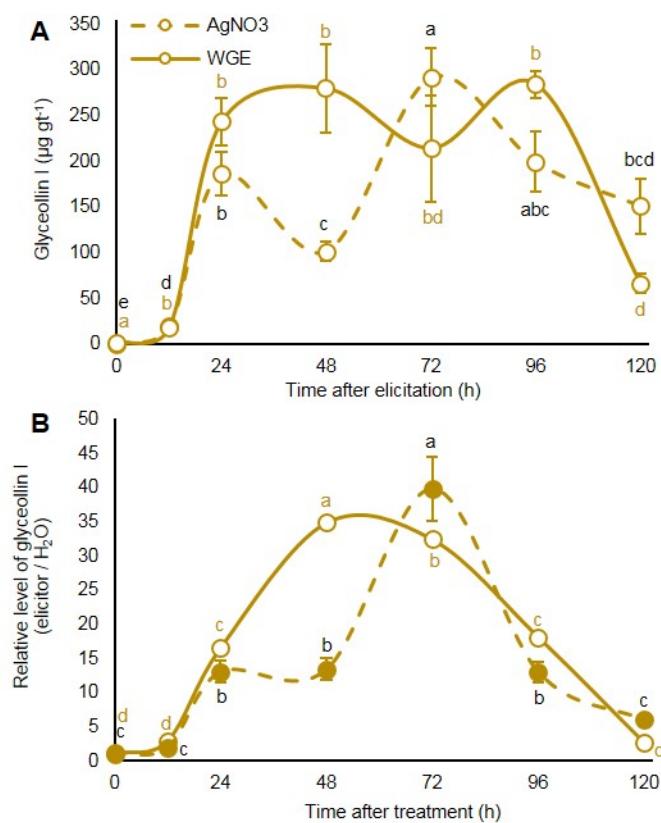


## Supplementary Figure S1



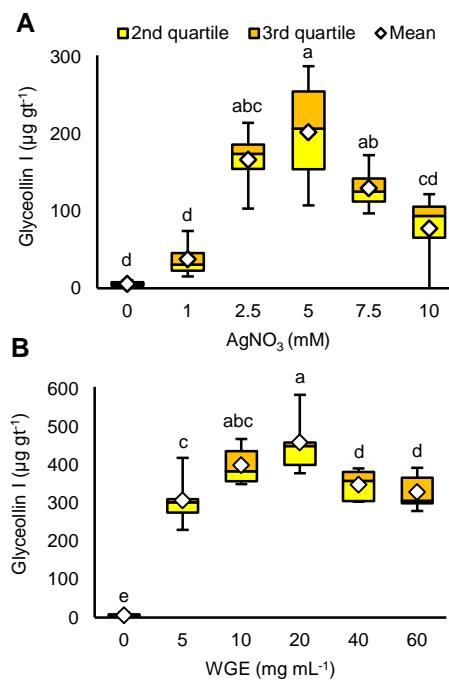
**Supplementary Figure S1.** Relative proportion of glyceollins from soybean organs treated with purified wall glucan elicitor (WGE) from *P. sojae* (**A**), from soybean seeds treated with biotic elicitors (**B**), chemical elicitors silver nitrate (AgNO<sub>3</sub>), copper chloride (CuCl<sub>2</sub>), benzothiadiazole (BTD), aminoethoxyvinyl glycine (AVG), and salicylic acid (SA) at 1 mM (**C**), seeds with AgNO<sub>3</sub> (5 mM) and WGE (20 mg mL<sup>-1</sup>) (**D**). Dashed line demarcates 50%.

## Supplementary Figure S2



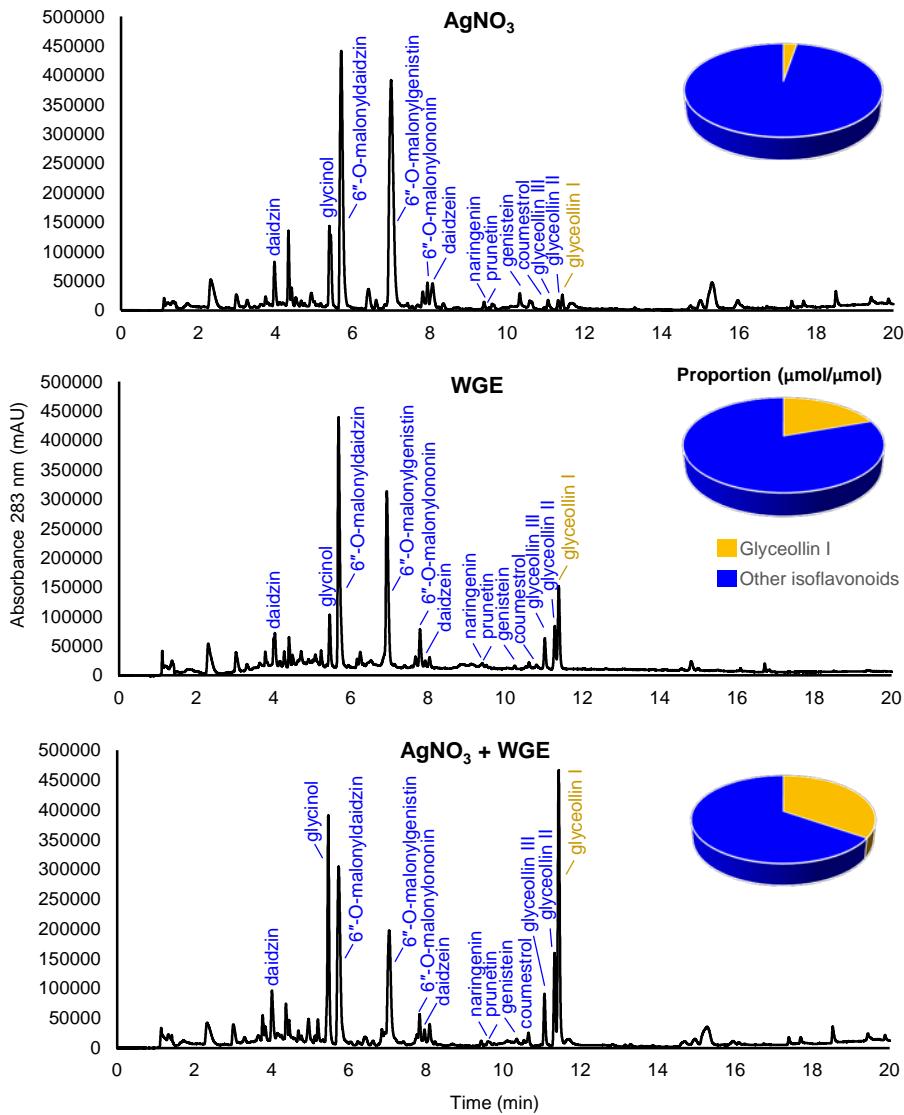
**Supplementary Figure S2.** **(A)** Glyceollin I accumulation dynamics after eliciting imbibed seeds with 5 mg mL<sup>-1</sup> WGE or 2.5 mM AgNO<sub>3</sub> for the indicated times. **(B)** Metabolite induction compared to the solvent control (H<sub>2</sub>O). Two-way ANOVA, Tukey post hoc test ( $P < 0.001$ ).

## Supplementary Figure S3



**Supplementary Figure S3.** (A) Glyceollin I concentrations in imbibing soybean seeds elicited with different concentrations of  $\text{AgNO}_3$ . (B) Elicitation with different concentrations of WGE. Two-way ANOVA, Tukey post hoc test,  $P < 0.001$ .

## Supplementary Figure S4



**Supplementary Figure S4.** Composition of glyceollin I relative to all other isoflavonoids in the seed ethanolic extract demonstrated by UPLC-PDA and by pie chart. The amounts of all UPLC-PDA peaks that were not annotated were compounds for which we did not have standards and were quantified based on daidzin equivalents.

**Supplementary Table S1. UPLC-PDA-MS<sup>n</sup> identifying features of isoflavonoids.**

Peak	<i>R</i> <sub>t</sub> (min)	$\lambda_{\text{max}}$ (nm)	[M - H] <sup>-</sup>	MS/MS fragments <sup>-</sup> ( <i>m/z</i> )	[M + H] <sup>+</sup>	MS/MS fragments <sup>+</sup> ( <i>m/z</i> )
daidzin <sup>a</sup>	4.39	250	415.10	253.05 [daidzein - H] <sup>-</sup>	417.12	255.06 [daidzein + H] <sup>+</sup>
glycinol <sup>b</sup>	5.47	283	271.06	217	255.07	227.59, 214.99
genistin <sup>a</sup>	5.48	260	431.10	-	433.11	271.07 [genistein + H] <sup>+</sup> , 255.07
6''-O-malonyldaidzin <sup>b</sup>	5.80	251	501.10	253.05 [daidzein - H] <sup>-</sup>	503.12	255.06 [daidzein + H] <sup>+</sup>
6''-O-malonylgenistin <sup>b</sup>	7.01	260	517.10	269.05 [genistein - H] <sup>-</sup>	519.11	271.06 [genistein + H] <sup>+</sup>
6''-O-malonylononin <sup>b</sup>	7.82	259	515.12	253.05 [daidzein - H] <sup>-</sup> 267.07 [formononetin - H] <sup>-</sup>	517.13	269.08 [formononetin + H] <sup>+</sup>
daidzein <sup>a</sup>	8.04	248	253.05	132.02	255.06	222.06
naringenin <sup>a</sup>	9.41	259	271.06	263.08	273.08	241.05
prunetin <sup>a</sup>	9.90	258	283.06	269.05 [genistein - H] <sup>-</sup>	285.08	-
genistein <sup>a</sup>	10.28	261	269.05	239.13	271.06	241.05
coumestrol <sup>a</sup>	10.90	342	267.03	253.09	269.04	236.05
glyceollin III <sup>b</sup>	11.10	289	337.11	319.10	339.12	321.11
glyceollin II <sup>b</sup>	11.30	283	337.11	319.10	339.12	321.11
glyceollin I <sup>a</sup>	11.48	283	337.11	255.07, 319.10	339.12	321.11

<sup>a</sup>Peak identities were based on MS feature comparisons to authentic standards.<sup>b</sup>Identities based on MS feature comparisons to Aisyah et al. 2013 and Simons et al. 2014.

**Supplementary Table S2. Primers.**

Gene	Primer	Sequence
PEPC16	qPCf	TGCAACTGATTCTTATGTTCAA
PEPC16	qPCr	GGCATCTAACACACCTCACG
G4DT	qG4f	TGGCTTCGGAGTTGGTATC
G4DT	qG4r	GAACAGCATTCCCATAACCC
IFS1	qIF1f	CACTCAAACCGGGATCACA
IFS1	qIF1r	GACGCAAGTGCAGAAACAAA
IFS2	qIF2f	GGAGAGGTTGTTGAGGGTGA
IFS2	qIF2r	GACCCTTGATGTGGTCCTG
I2'H	qI2f	CCATGCTTTGGTGGAACT
I2'H	qI2r	GCCTCTTCAACACCTCTGG