

Table 3. Genistein and flavonol levels in individual progeny of transgenic *Arabidopsis* expressing soybean IFS and/or alfalfa CHI\*

Line	Generation	Alfalfa CHI activity, nmol/min/mg	Quercetin, nmol/g FW	Kaempferol, nmol/g FW	Total flavonols, nmol/g FW	Genistein, nmol/g FW
Wild-type	T <sub>4</sub>	0	32.4±5.9	285.8±35.7	318.2±36.7	0
CHI 4-11	T <sub>4</sub>	49.6±3.0	79.6±16.4	475.3±77.8	555.0±84.5	0
IFS 15b	T <sub>4</sub>	0	29.4±7.3	162.7±37.4	192.1±43.9	11.9±1.9
IFS/CHI-1	F <sub>2</sub>	ND <sup>†</sup>	77.1±11.2	247.9±60.5	325.0±70.7	43.9±1.3
IFS/CHI-2	F <sub>2</sub>	ND	23.0±9.1	216.5±50.8	239.5±56.4	9.6±3.1
IFS/CHI-3	F <sub>2</sub>	ND	89.7±8.4	503.6±48.8	593.3±57.2	9.0±1.8
IFS/CHI 3-2-1	F <sub>3</sub>	38.8±2.3	65.4±5.8	334.9±21.9	400.3±27.6	11.3±2.7
IFS/CHI 3-2-2	F <sub>3</sub>	42.6±1.9	38.2±6.2	297.0±7.4	335.2±13.2	10.7±1.5
IFS/CHI 3-2-3	F <sub>3</sub>	35.2±1.7	12.8±5.2	67.9±6.8	80.7±1.7	5.7±1.2
IFS/CHI 3-3-1	F <sub>3</sub>	0	35.9±3.6	81.4±9.6	117.2±12.5	19.4±2.4
IFS/CHI 3-4-1	F <sub>3</sub>	0	21.4±4.1	75.0±11.9	96.4±11.3	17.6±0.4
IFS/CHI 3-4-2	F <sub>3</sub>	46.5±1.0	40.7±4.3	205.3±17.5	246.0±21.7	16.4±0.3
IFS/CHI 3-4-3	F <sub>3</sub>	52.6±1.6	49.9±7.1	311.5±9.1	361.4±13.3	13.5±2.5
IFS/CHI 3-4-4	F <sub>3</sub>	43.8±0.6	31.4±2.6	251.0±6.4	282.4±7.8	8.2±1.6
IFS/CHI 3-5-1	F <sub>3</sub>	63.6±1.3	77.3±8.4	672.3±8.6	749.6±17	7.0±0.8

\*Plants were grown under 12-h light/12-h dark, ~150 μE light intensity, for 35 days. Data for T<sub>4</sub> plants are means ± SE from at least five replicate plants with 2-3 independent analyses for each plant. Data for individual F<sub>2</sub> and F<sub>3</sub> progeny represent triplicate analyses.

<sup>†</sup>Not determined