

**Additional file 4:** Metabolite eigenvalues for principal component analysis (PCA). The metabolites appear below are the seven metabolites with the highest eigenvalues for components one and two, in each of the PCAs performed for GC-MS and UPLC-QTOF-MS/MS data sets, for both fruit pulp and seed tissues. The values in parentheses represent the  $m/z$  for each metabolite. MP = main product, BP = by product

**PCA of GC-MS data set obtained from fruit pulp tissues**

Metabolite	Component 1	Metabolite	Component 2
Glucose MP	3.665	<i>myo</i> -Inositol	4.918
Fructose MP	3.200	Glucose MP	2.403
<i>myo</i> -Inositol	3.162	Fructose MP	1.156
Fructose BP	2.141	Fructose BP	1.043
Glucose BP	0.874	Citrate	0.968
Citrate	0.168	Glucose BP	0.822
Proline	0.027	Malate	0.081

**PCA of GC-MS data set obtained from seed tissues**

Metabolite	Component 1	Metabolite	Component 2
<i>myo</i> -Inositol	5.406	Sucrose	4.831
Sucrose	1.862	Raffinose	2.218
Glucose MP	1.271	<i>myo</i> -Inositol	1.743
Fructose MP	1.211	Glucose MP	1.447
Fructose BP	0.869	Citrate	0.801
Raffinose	0.182	Fructose MP	0.185
Citrate	0.181	Pyroglutamate	0.126

**PCA of UPLC-QTOF-MS/MS data set obtained from fruit pulp tissues**

Metabolite	Component 1	Metabolite	Component 2
NA (160.0756)	2.379	NA (188.0665)	2.329
Hylocerenin (695.1955)	1.604	Hylocerenin (695.1955)	1.540
NA (151.0348)	1.132	NA (160.0756)	1.058
Phylocactin (637.1495)	0.645	NA (151.0348)	0.810
NA (188.0665)	0.396	Phylocactin (637.1495)	0.688
NA (127.0351)	0.353	NA (127.0351)	0.405
NA (551.1488)	0.322	NA (551.1488)	0.403

**PCA of UPLC-QTOF-MS/MS data set obtained from seed tissues**

Metabolite	Component 1	Metabolite	Component 2
NA (188.0699)	3.354	NA (285.0811)	3.282
NA (285.0811)	1.982	NA (188.0699)	1.798
NA (160.0657)	1.788	NA (329.9262)	1.022
NA (149.0581)	0.614	NA (149.0581)	0.823
NA (493.2780)	0.587	NA (147.0416)	0.771
NA (147.0416)	0.539	NA (160.0657)	0.448
NA (365.1045)	0.530	NA (151.0308)	0.388