Figure and Tables from Rodriguez-Uribe et al., 2012, for "To Pick a Peck of Orange Peppers"

Rodriguez-Uribe, L., I. Guzman, W. Rajapakse, R.D. Richins, & M.A. O'Connell. (2012). Carotenoid accumulation in orange-pigmented *Capsicum annum* fruit, regulated at multiple levels. *Journal of Experimental Botany* 63(1): 517–26. <https://doi.org/10.1093/jxb/err302>

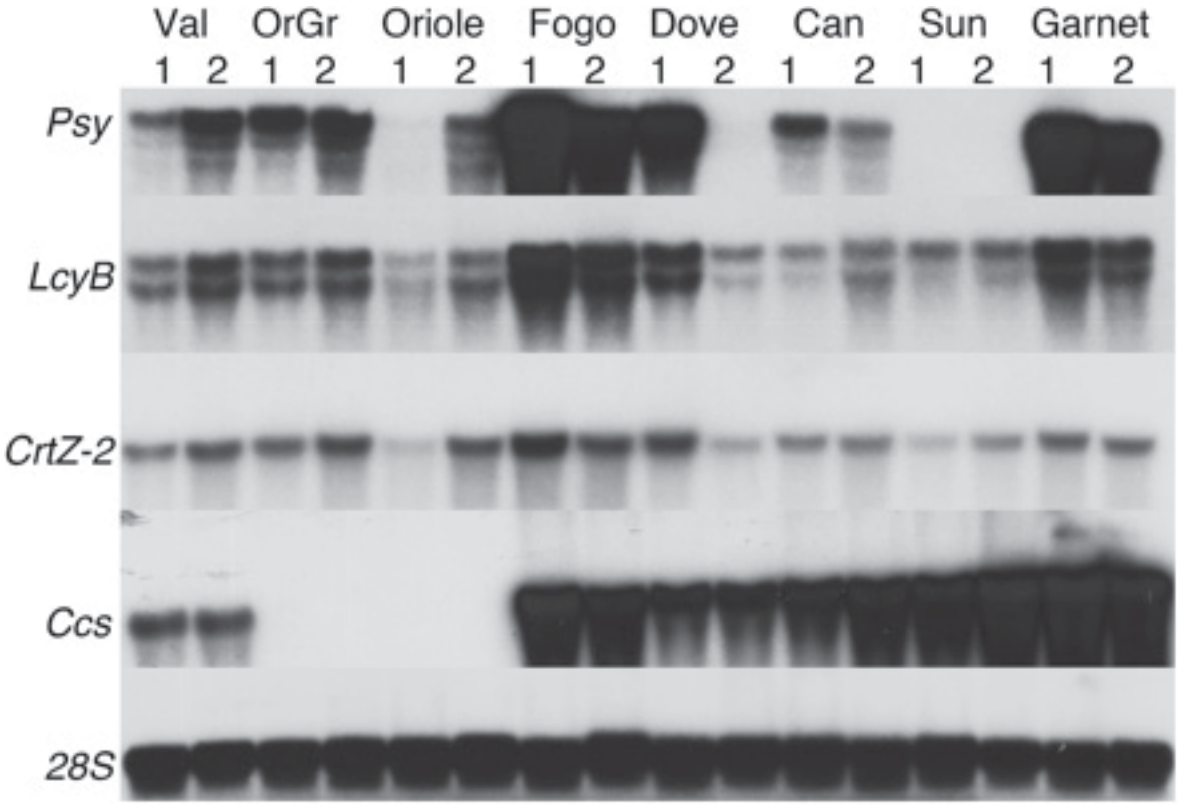

Figure 4. Transcript abundances for carotenoid pathway genes. Northern blots with total RNA from immature (1) or mature (2) pericarp from: Valencia (Val), Orange Grande (OrGr), Oriole, Fogo, Dove, Canary (Can), NuMex Sunset (Sun) or NuMex Garnet (Garnet) were hybridized with radiolabelled probes of the indicated carotenoid pathway genes or 28S rRNA.

Table 1. Carotenoid accumulation in *Capsicum* fruit expressed as μg g^{-1} fresh wt pericarp ±SD, n=3, in immature fruit (turning) or mature fruit.

		β-carotene	β-cryptoxanthin	Lutein	Zeaxanthin	Violaxanthin	Capsanthin	Unidentified carotenoids[a]
Canary	Turning	1.94±0.20	nd	nd	3.43±0.48	11.48±1.13	nd	14.75±2.99
	Mature	nd	nd	3.77±0.19	1.20±0.12	11.83±1.02	nd	6.50 ±0.55
Fogo	Turning	4.74±0.72	1.11±0.17	10.50±0.52	5.68±0.68	11.79±1.08	nd	21.04±2.34
	Mature	9.34±1.25	4.64±0.44	18.73±0.77	18.93±1.25	43.34±3.78	nd	66.59±5.99
Orange Grande	Turning	2.04±0.55	1.29±0.35	10.66±1.56	20.90±3.53	1.65±0.21	nd	9.83±3.01
	Mature	6.75.±3.11	2.16±1.77	14.41±4.65	44.44±16.50	2.16±0.34	nd	24.77±8.36
Oriole	Turning	2.03±0.61	1.12±0.07	9.25±1.72	19.78±3.79	2.14±0.39	nd	11.88±3.55
	Mature	4.94±1.47	2.67±0.66	10.18±1.87	39.14±6.98	1.64±0.22	nd	17.89±3.13
Valencia	Turning	2.78±1.07	nd	nd	3.73±0.23	5.11±0.93	nd	16.17±3.36
	Mature	5.48±0.27	1.11±0.08	nd	8.09±2.05	11.20±3.03	13.68±8.81	18.00±5.57
NuMex Sunset	Turning	nd	nd	nd	nd	3.63±2.63	10.42±0.52	8.63±3.32
	Mature	nd	nd	nd	nd	nd	8.18±0.51	2.42±0.09
Dove	Mature	nd	nd	nd	nd	0.69±0.12	18.84±1.31	8.76±2.36
NuMex Garnet	Mature	36.00±6.00	19.02±3.44	nd	24.08±2.48	6.43±1.11	116.25±15.41	117.02±16.90

[a] HPLC peaks were detected by absorbance at 450 nm, but not eluting with retentions times of any reference standards; concentrations calculated based on β-carotene calibration curves.

Table 2. Transcript abundances for *Psy, CrtZ-2*, and *Ccs* detected by qRT-PCR in pericarp samples from immature or mature *C. annuum* cultivars (ng 100 ng^{-1} RNA, average ±SD, *n*=3)

		Psy	*CrtZ-2*	*Ccs*
Canary	Turning	0.56±0.02	0.19±0.0	2.24±0.07
	Mature	0.51±0.05	0.19±0.0	1.69±0.23
Fogo	Turning	5.6±0.24	0.41±0.0	1.93±0.00
	Mature	2.13±0.17	0.98±0.0	2.93±0.00
Oro Grande	Turning	0.64±0.05	0.26±0.0	0
	Mature	0.90±0.08	0.56±0.0	0
Oriole	Turning	0.12±0.0	0.14±0.0	0
	Mature	0.38±0.02	0.23±0.0	0
Valencia	Turning	0.18±0.03	0.19±0.0	0.21±0.03
	Mature	0.88±0.03	0.40±0.0	0.37±0.01
NuMex Sunset	Turning	0	0.11±0.0	1.62±0.16
	Mature	0	0.18±0.0	2.97±0.06
Dove	Turning	4.06±0.14	0.63±0.0	0.99±0.01
	Mature	0.06±0.0	0.1±0.0	1.07±0.05
NuMex Garnet	Turning	3.38±0.14	0.49±0.0	6.84±0.37
	Mature	1.98±0.30	0.39±0.0	9.69±0.82

Table 3. Nucleotide sequence polymorphisms in the Ccs promoter Positions of DNA sequence polymorphisms in the Ccs promoter of the orange C. annuum cultivars relative to the reference sequence of the Ccs promoter in the red C. annuum cultivar (GenBank Y14165; Ha et al., 2007). Numbers indicate the position relative to ATG codon.

Variety	Position –711	Position –483	Position –312
GenBank Y14165	C	C	G
Canary	T	C	A
Fogo	T	C	A
NuMex Sunset	C	T	G
Valencia	T or C	T or C	A or G
Oriole	T or C	T or C	A or G
Orange Grande	C	T or C	A or G