

<b>LEAFLET</b>			
size	medium	medium	medium
frequency of coalescence	low	n/a	n/a
waviness of margin	weak	weak	medium
depth of veins	medium	n/a	n/a
anthocyanin of blade at apical rosette	absent	n/a	absent
glossiness of upperside	medium	medium-dull	medium
frequency of secondary leaflets (on terminal leaflet)	medium	n/a	n/a
frequency of secondary leaflets (on lateral leaflet)	low	n/a	low
size of secondary leaflets on laterals	small	n/a	large
<b>INFLORESCENCE</b>			
size	large	n/a	n/a
anthocyanin colouration of peduncle	absent	absent	absent
frequency of flowers	high	medium	medium-high
anthocyanin colouration of bud	absent-very weak	medium	absent
<b>FLOWER COROLLA</b>			
size	medium	small	n/a
colour of inner side	white (RHS 155C)	purple-violet (RHS 82D)	white
intensity of anthocyanin colouration of inner side in coloured flower	very weak	medium	n/a
anthocyanin colouration of outer side in white flower	absent	n/a	absent
<b>FRUIT</b>			
frequency of fruits	medium	medium	few
<b>TUBER</b>			
shape	round (round-oval)	oval (round)	round n/a
depth of eyes	shallow	intermediate	n/a
smoothness of skin	smooth	netted-russet	flaky russet
colour of skin	yellow (light-brown)	brown	russet
colour of base of eyes	yellow	n/a	n/a
colour of flesh	white (white)	white (white)	white
anthocyanin colouration of skin in reaction to light	absent	n/a	n/a

\*Note: Characteristics of 'FL 1867' are derived from the official (UPOV) South African description. The characteristics of 'Atlantic' are based on those described from Canadian comparative field trials (that included FL 1867). The characteristics of 'Smith's Astra'<sup>(1)</sup> are derived from an Australian comparative trial report [PVJ 12 (1)48]. The data in parentheses are from the Australian comparative lightsprout trial and observation of Australian-grown tubers.

**PUMPKIN***Cucurbita maxima***'Dulong QHI'**

Application No: 97/309 Accepted: 21 Nov 1997.

Applicant: **The State of Queensland through its Department of Primary Industries, Brisbane, QLD.**

**Characteristics** (Table 34, Figure 49) Plant: growth habit trailing. Stem: colour green, mostly dark green (RHS 133A) with lighter green (RHS 146C) striped. Leaf Blade: size medium, intensity of green colour upper side medium (RHS 146A). Petiole: length medium, thickness at base medium. Female flower: length of sepal medium, sepals tend to be petalous, intensity of orange colour of pistil at opening medium (RHS 12A). Male flower: length of pedicel medium, diameter of pedicel medium, intensity of green colour of pedicel light, hairiness of pedicel weak, length of sepal medium. Fruit: main colour of pedicel green otherwise corky, size medium, length medium, diameter medium, shape in longitudinal cross section transverse elliptic, shape of stalk-end depressed, shape of apical (blossom end) depressed to flat, grooves present and slightly to moderately deep with medium distance between grooves, number of colours on skin one or two, main colour of skin grey (RHS 198A), intensity of main colour light to medium, secondary colour of skin grey (198B) distribution of secondary colour marbled, texture of surface smooth, warts absent, medium thickness of flesh, main colour of flesh orange (RHS 21A), intensity of main colour of flesh medium. Seed: size medium, shape elliptic, seed surface smooth, seed colour brownish (164C), colour of margins yellowish white (9D) weight of 1000 seeds medium (174g). (Note: all RHS colour chart numbers refer to 1995 edition).

**Origin and Breeding** Controlled and open pollination followed by selection at each stage: *C. maxima* 'Queensland Blue' (Selected Strain) was crossed with *C. ecuadorensis* followed by three backcrosses to 'Selected', 'Large' (Yates Seed Co), and 'Wallworks' strains of 'Queensland Blue', followed by 2 generations of self-pollination and 2 generations of open-pollination, selected separate plants crossed to 'Jarrahdale' (Yates) and to 'W19' [a selection of parentage similar to above] and the resultant progeny were intercrossed, followed by a generation of self-pollination, intercrossed resultant selections, then 1 generation of self-pollination, out-crossed to 'Jarrahdale' (New World), then 7 generations of open pollination (in which initial population included the population of the above crossed with 'Jarrahdale' (SPS), followed by two generations of self-pollination then one generation of open-pollination as combined lines 3214 and 3218. From these lines, through open pollination a uniform stable line known as 3287 was selected to become 'Dulong QHI'. The original seed parent and all commercial parents in the ancestry were characterised by susceptibility to papaya ringspot virus type w and to zucchini yellow mosaic virus and the original pollen parent was characterised by weedy vine growth and white fleshed fruit. Trials conducted at Redlands, Maroochy and Bowen Research Stations of Queensland Department of Primary Industries. Selection criteria: resistance to potyviruses (papaya ringspot virus type w, zucchini yellow mosaic virus, watermelon mosaic virus), yield, grey skinned fruit, and good flesh and consumer characteristics.

Propagation: by seed. Breeder: M. Herrington<sup>1</sup>, R. Wright<sup>2</sup>, S. Prytz<sup>1</sup> and D. Persley<sup>3</sup>, Queensland Horticulture Institute, Nambour<sup>1</sup>, Bowen<sup>2</sup>, Indooroopilly<sup>3</sup>, Queensland Department of Primary Industries, QLD, Australia.

**Choice of Comparators** ‘Jarrahdale’, ‘Queensland Blue’, ‘Eudlo QHI’ and ‘Redlands Trailblazer’ were initially considered for the comparative trial as these are similar varieties of common knowledge. ‘Queensland Blue’ is an older available commercial variety and one of the early parents, however it is highly susceptible to viruses and has dark skin. Therefore it was excluded from the trial. ‘Eudlo QHI’ was chosen because of its similar pedigree, its high virus resistance and moderately similar fruit type, however it has variable seed colour and a low tendency to produce petalous sepals on female flowers. ‘Redlands Trailblazer’ was chosen for its high virus resistance, but has white seed. The ancestral parent *C. ecuadorensis* was not considered for the trial because *C. ecuadorensis* has a commercially unacceptable weedy plant growth habit, creamy flowers, and white fleshed fruit, which clearly distinguish it from ‘Dulong QHI’. Although virus susceptible the most recently used parent ‘Jarrahdale’ (SPS) was included as a parent in the comparative trial.

**Comparative Trial** Comparators: ‘Jarrahdale’, ‘Eudlo QHI’ and ‘Redlands Trailblazer’. Location: Maroochy Research Station, Nambour, QLD (latitude 26°37′. South, longitude 152°57′ east, elevation 29m), Mar to Aug 1999. Conditions: trial conducted in field, sown in cells then transplanted to field, overhead irrigated, nutrition maintained with fertiliser applications based on soil test, pest and disease treatments applied as required. Spacings 5m between rows, 2 m between plants within rows. Trial design: randomised complete block design with 5 blocks and 4 plants per plot, with an additional plant of ‘Dulong QHI’ in each block. Measurements: plants or external characteristics of fruit mostly from twenty individual plants, internal fruit characteristics from mature fruit of ten plants per cultivar. One sample per plant except 2 per plant (flower) for length of sepals.

#### Prior Applications and Sales Nil.

Description: M. E. Herrington, Maroochy Research Station, Nambour QLD.

**Table 34 Cucurbita varieties**

	‘Dulong’ QHI’	*‘Eudlo QHI’	*‘Redlands’*‘Jarrahdale’ Trailblazer’	
<b>STEM: COLOUR</b>				
	green, dark (133A) with lighter (146C) stripes	green, dark (133A) with lighter (137B) stripes	green, dark (133A) with lighter (146C) stripes	green, uniform (146A)
<b>LEAF BLADE: WIDTH (mm)</b>				
mean	307	283	244	277
std deviation	21.97	17.50	19.95	19.26
LSD/sig	25.4	ns	P≤0.01	P≤0.01
<b>LEAF BLADE: LENGTH (mm)</b>				
mean	197	183	167	186
std deviation	24.20	25.03	28.38	30.30
LSD/sig	19.7	ns	P≤0.01	ns
<b>LEAF BLADE: LENGTH/WIDTH RATIO</b>				
mean	0.640	0.649	0.682	0.673
std deviation	0.032	0.032	0.036	0.029
LSD/sig	0.028	ns	P≤0.01	P≤0.01
<b>PETIOLE: THICKNESS(at base, mm)</b>				
mean	14.9	13.0	12.4	13.7
std deviation	1.59	1.36	1.81	1.66
LSD/sig	1.5	P≤0.01	P≤0.01	ns
<b>FEMALE FLOWER: LENGTH OF SEPAL (mm)</b>				
mean	15.5	12.5	7.4	20.9
std deviation	3.85	1.95	1.37	4.52
LSD/sig	5.3	ns	P≤0.01	P≤0.01
<b>FEMALE FLOWER: LENGTH OF PEDICEL (mm)</b>				
mean	25	21	15	27
std deviation	6.8	3.0	5.8	3.9
LSD/sig	8	ns	P≤0.01	ns
<b>FEMALE FLOWER: PETALOUSNESS OF SEPALS (number of plants with flowers)</b>				
petalous	14	0	0	0
nonpetalous	2	17	4	6
<b>MALE FLOWER: LENGTH OF SEPAL (mm)</b>				
mean	19.7	20.2	12.8	24.1
std deviation	3.55	3.08	2.00	3.08
LSD/sig	3.0	ns	P≤0.01	P≤0.01
<b>FRUIT: SIZE (g)</b>				
mean	3249	3507	2071	4644
std deviation	800	1091	460	1543
LSD/sig	755	ns	P≤0.01	P≤0.01
<b>FRUIT: SIZE</b>				
	medium	medium	small	medium to large
<b>FRUIT: LENGTH (mm)</b>				
mean	120	142	134	148
std deviation	9.5	21.2	13.1	19.6
LSD/sig	17	P≤0.01	ns	P≤0.01

FRUIT : DIAMETER (mm)				
mean	226	224	175	239
std deviation	18.0	19.2	14.7	27.8
LSD/sig	21	ns	P≤0.01	ns
FRUIT : LENGTH/DIAMETER RATIO				
mean	0.536	0.637	0.762	0.624
std deviation	0.042	0.097	0.061	0.072
LSD/sig	0.064	P≤0.01	P≤0.01	P≤0.01
FRUIT: SHAPE IN LONGITUDINAL CROSS SECTION				
	transverse	transverse	circular	transverse
	elliptic	elliptic	elliptic	elliptic
FRUIT: SHAPE OF STALK END				
	depressed	depressed	flat	depressed to flat
FRUIT: SHAPE OF APICAL (blossom) END				
	depressed to flat	depressed to flat	flat	depressed
FRUIT: GROOVES				
	slight to moderate grooves	slight to moderate grooves	very slight	moderate grooves
FRUIT DISTANCE BETWEEN GROOVES (mm)				
mean	70	73	56	72
std deviation	10.4	9.5	8.4	13.0
LSD/sig	9.6	ns	P≤0.01	ns
FRUIT: NUMBER OF COLOURS OF SKIN				
	one to two	one to two	one	one to two
FRUIT: MAIN COLOUR OF SKIN				
	grey (198A)	grey (198A)	grey (198A)	grey (198B) uniform
FRUIT: INTENSITY OF MAIN COLOUR OF SKIN				
	light to medium	light to medium	medium to light	medium to light
FRUIT: SECONDARY COLOUR OF SKIN				
	grey (198B)	grey (198C)	grey (198A)	grey (198C) uniform
FRUIT: THICKNESS OF FLESH (mm)				
mean	50	47	31	51
std deviation	6.7	6.4	3.2	10.8
LSD/sig	9	ns	P≤0.01	ns
FRUIT: MAIN COLOUR OF FLESH				
	orange (21A)	variable, yellow 2/10, orange (21A) 7/10, and cream (8C)1/10	orange (21A)	orange (21A)
FRUIT: INTENSITY OF MAIN COLOUR OF FLESH				
	medium	medium, variable	medium	medium to dark
SEED: WIDTH (mm)				
mean	9.6	10.3	10.8	9.8

std deviation	0.39	1.09	0.49	0.60
LSD/sig	1.0	ns	P≤0.01	ns

## SEED: LENGTH/WIDTH RATIO

mean	1.57	1.55	1.33	1.61
std deviation	0.056	0.114	0.083	0.104
LSD/sig	0.14	ns	P≤0.01	ns

## SEED: COLOUR (RHS, 1995)

brownish (164 C)	mixed, 28% whitish (155D) and 72% yellowish brownish (165D)	whitish (155D)	yellowish brownish (165D)
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## SEED: COLOUR OF MARGIN (RHS 1995)

whitish to yellowish (9D)	whitish to yellowish (10D)	whitish (155D)	whitish to yellowish (11C)
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## SEED: WEIGHT OF 1000 DRY SEEDS (g)

mean	174	206	169	227
std deviation	38.47	40.43	15.86	43.29
LSD/sig	55.7	ns	ns	P≤0.01

## ROSE

*Rosa*

## 'Baby Jack'

Application No: 98/158 Accepted: 18 Sep 1999.

Applicant: **Kay-D-Tee**, Silvan, VIC.

**Characteristics** (Table 35, Figure 1) Plant: habit miniature bushy, height medium, width narrow. Stem: anthocyanin strong, colouration reddish brown. Prickles: present, lower surface deeply concave, small thorn density absent, large thorn density medium. Leaf: size medium, colour at first flowering medium green, upper surface glossiness weak, cross section flat, margin undulation medium. Terminal leaflet: length medium (30mm-47mm), width medium (17mm-26mm), base shape rounded. Flowering shoot: number of flowers many. Flower pedicel: number of hairs many. Bud: shape of longitudinal section just before petal separation ovate. Flower: type double, number of petals medium (25-35), diameter medium (51mm-66mm), view from top irregularly round, profile; upper flat, lower flattened convex, fragrance medium. Sepal: extensions weak. Petals: size medium, inside surface colour; middle zone RHS 157B, marginal zone RHS 65D, basal spot absent, outer surface colour; middle zone RHS 157B, marginal zone RHS 157B, basal spot absent, reflex at margin weak, margin undulation medium. Stamen filament: colouration orange. Seed vessel: size at petal fall medium. Hip: pitcher shaped. Time of flowering: medium (early November). Flowering habit: almost continuous. (Note: all RHS colour chart number refers to 1995 edition.)

**Origin and Breeding** Spontaneous mutation: from 'Benfig'<sup>(1)</sup>. The parent is characterised by its porcelain pink flowers, upright habit, and prolific flowering. Selection of the sport took place in Silvan, VIC in 1995 on the basis of