

'O'Rourke', 'Champagne' and 'Tiger'
Three new fig varieties from the LSU AgCenter

Fig (*Ficus carica* L.) breeding selections L57-11-103, L55-13-22 and L57-13-121; **'O'Rourke'**, **'Champagne'** and **'Tiger'** respectively, are releases from the Louisiana State University Agricultural Center fig breeding program which was initiated in the 1950s to develop cultivars for the Gulf South region. During this period, crosses were made and seedlings evaluated for adaptation by E.N. O'Rourke, Professor, Department of Horticulture. This program was discontinued in the early 1960s; however, elite selections from this program were maintained at the Central Research Station until about 1980, and then moved to the Hammond and Citrus Research Stations. In 1997, we initiated a project with the intent of re-establishing an evaluation orchard containing the elite selections and recommended cultivars for comparison of fruiting characteristics, disease resistance, growth characteristics and cold tolerance for commercial potential. Trees were propagated from reliable sources that had maintained trees from the original plantings. Morphological characteristics of the putative selections were carefully compared to original notes and photographs to ensure proper identification. Comparative ratings were made between trees of the same age and under same cultural management. Breeding selections designated L57-11-103, L55-13-22 and L57-13-121 were evaluated in plantings at research stations located at Burden Center, Baton Rouge, La. from 2000-2006, and at the Citrus Research Station at Port Sulfur, La., until 2005. These selections were chosen for release because of superior fruiting characteristics.

'OROURKE'

(L57-11-103)

Parentage

'**ORourke**' is a selection from a group of seedlings derived from a cross of 'Celeste' x 'C1' (a Capri fig from California). The cross was made in 1956 and an individual plant selection made by Ed O'Rourke in 1960 and tested as L57-11-103.

Description

Fruit: '**ORourke**' produces good quality fruit 30 to 40 mm in diameter of moderate size (20 gms) light brown fruit. The tan to brown fruit of '**ORourke**' (Figure 3) has a slightly round distal end and tapers slightly toward the stem end with a long neck. The fruit has a partially closed eye (ostiole) on mature fruit. Internal color is tan with some red near center of fruit when soft ripe (Table 2). Fruit ripen about 5 to 7 days before 'Celeste' or about the last week of June in the Baton Rouge, La. area. The main crop fruit of '**O'Rourke**' ripens over a 15-day period which is comparable to 'Celeste' and 'Florentine'.

Trees and foliage: '**O'Rourke**' trees are vigorous growing, producing upright trunks with a slight tendency to produce horizontal growth in juvenile stage. Foliage cover is sparse when compared to 'Celeste' in that trunks and branches of '**ORourke**' are still visible after full foliation in midseason. The mature leaves of '**ORourke**' are palmate with five to seven distinct lobes (Figure 2). The primary lobe is spatulate and has an oak leaf in appearance. The margin of the leaf on the basal lobes of '**ORourke**' is slightly toothed.

CHAMPAGNE

(L55-13-22)

Parentage

'**Champagne**' is a selection from a group of seedlings derived from a cross of 'Celeste' x 'C1' (a Capri fig from California). The cross was made in 1955 and the selection made by Ed O'Rourke in 1959 and tested as L55-13-22.

Description

Fruit: '**Champagne**' produces good quality, 30-40mm diameter, moderate size (23 gms) yellow fruit. The fruit of '**Champagne**' (Figure 3) have a slightly round distal end and tapers slightly toward the stem end with a short neck. The fruit has a partially closed eye (ostiole) on mature fruit. Internal color is tan to caramel color when soft ripe (Table 2). Fruit ripen about the same time as 'Celeste', the first week of July in the Baton Rouge, La. area. The main crop fruit of '**Champagne**' ripens over a 15-day period which is comparable to 'Celeste' and 'Florentine'.

Trees and foliage: Trees of '**Champagne**' are vigorous growing, producing upright trunks, and, left unpruned, will produce a pyramidal shaped tree. Foliage cover is sparse when compared to 'Celeste' in that trunks and branches of '**Champagne**' are still visible after full foliation in midseason. The mature leaves of '**Champagne**' are palmate with five distinct lobes. The primary lobe is spatulate (Figure 2). The basal lobes are cordate with slight serrations.

'TIGER'

L57-13-121

Parentage

'**Tiger**' is a selection from a group of seedlings derived from a cross of 'Celeste' x 'C1' (a Capri fig from California). The cross was made in 1957 and the selection made by Ed O'Rourke in 1961 and tested as 57-13-121.

Description

Fruit: '**Tiger**' produces good quality, 30 to 40 mm in diameter, large size (50 gms) brown fruit with a darker brown stripe visible on most fruit. The brown fruit of L57-13-121 (Figure 3) have a slightly round distal end and taper slightly toward the stem end with a short neck. The fruit has a partially closed eye (ostiole) on mature fruit. Internal color is yellow to gold when with some near center when soft ripe (Table 2). Fruit ripen about five to seven days after 'Celeste' or about the first week of July in the Baton Rouge, La. area. The main crop fruit of L57-13-121 ripens over a 15-day period which is comparable to 'Celeste' and 'Florentine'. Fruit of all currently recommended cultivars of figs will split and crack to some degree during the ripening stage when excessive moisture is present. Notations on deep radial cracks radiating from the ostiole of L57-13-121 one to three days after heavy rain events have been made. Field ratings indicate that L57-13-121 has a greater tendency to have radial cracks when ripe than 'Celeste', but fewer than 'Florentine' and 'Magnolia'.

Trees and foliage: L57-13-121 trees are vigorous growing with a prostrate to drooping growth habit in the juvenile stage. Foliage cover is dense when compared to LSU Gold.

The mature leaves of L57-13-121 are very large palmate with five to seven distinct lobes. The primary lobe is spatulate and leaf margins slightly toothed. The margin of the leaf on the basal lobes of L57-13-121 is slightly toothed (Figure 2).

Recommendations:

'ORourke', 'Champagne' and 'Tiger' are distinctly different from available fig cultivars and should offer a unique blend of color and size for pick-your-own, farmers' markets and local markets. These selections produce larger, good quality fruit for marketing considerations (Puls, 1995), and complement current recommended varieties by increasing the diversity of fruit types. A marketing limitation that should be noted is the tendency of the fruit of L55 -13-22 and L57-11-103 to have a partially closed eye at maturity. Under humid conditions, this could increase the amount of fruit spoilage. When the fruit is harvested at the proper stage for processing (firm ripe), this should not present a problem. Figs are a very popular dooryard fruit and exist in many residential landscapes in the Gulf South. There have been very few new releases of named fig varieties from a public breeding program in the past fifty years. One of the largest benefactors of a new fig release will be tree nurseries in supplying trees to homeowners and hobbyist. Figs are easily propagated and can be grown to a saleable tree in about 10 months. This should present a good opportunity for local nurseries.

Table 1. Comparisons of colorimeter measurements from skin of eight fig cultivars and breeding selections.

Cultivar	L ^x	a ^y	b ^z	Visual color
Kadota	65.86	2.12	51.63	Yellow
Champagne	64.43	2.02	50.69	Yellow
Hunt	50.12	12.22	34.22	Tan
Celeste	49.38	12.05	16.04	Tan
O'Rourke	46.00	8.76	23.74	Tan
Tiger	45.28	10.59	25.94	Tan
Hardy Chicago	30.88	14.49	11.38	Black
LSU Purple	24.71	4.33	1.53	Purple
Std.err	13.13	4.58	17.51	-----

External measurements are the mean values from sixteen uniformly ripe fruit

Color was measured by a Minolta CM3500d spectrophotometer using standard CIE scale.

^xL = degree of lightness 100= pure white, 0 = black

^ya = measurement of green to red on a scale of -80 to 100 , -80 =green ,100 =red

^zb = measurement of yellow to blue on a scale of -80 to 70, -80 = blue and 70 = yellow.

Table 2. Comparison of colorimeter measurements from pulp of nine fig cultivars and breeding selections.

Cultivar	L ^x	a ^y	b ^z
Hunt	54.37	12.94	35.14
Kadota	52.33	7.29	36.15
O'Rourke	51.40	6.47	34.80
Champagne	50.71	6.52	38.17
LSU Purple	48.2	11.19	28.98
Tiger	47.17	15.53	29.26
Celeste	45.18	18.51	24.49
Hollier	45.06	12.27	29.24
Hardy Chicago	45.03	22.96	24.71
Std.err	3.50	5.65	5.01

Internal measurements from puree of sixteen uniformly ripe fruit.

Color was measured by a Minolta CM3500d spectrophotometer using standard CIE scale.

^xL = degree of lightness 100= pure white, 0 = black

^ya = measurement of green to red on a scale of -80 to 100 , -80 =green ,100 =red

^zb = measurement of blue to yellow on a scale of -80 to 70, -80 = blue and 70 = yellow.

Table 3. Comparison of fruit fig cultivars and selections for fruit characteristics.

Cultivar	Fr ^t Wt ^x	% SS ^y	No./pint ^z
Magnolia	50.33	21.2	10
Alma	35.71	18.1	9
LSU Gold	31.53	15.2	9
Tiger	27.51	17.5	13
Kadota	26.41	17.4	12
Champagne	25.39	18.1	14
Hardy Chicago	24.60	15.7	14
Hollier	20.03	19.8	16
O'Rourke	19.86	18.1	17
LSU Purple	17.80	17.5	20
Hunt	15.90	20.3	17
Celeste	14.02	21.3	25

^x wt is the mean of 16 fruit in grams

^y %SS is % soluble solids (total sugars) as measured by a refractometer

^z #/pint is the number of fruit that will fit in a standard pint fruit container

Figure 1. Comparison of trees of **O'Rourke**, **Tiger**, and **Champagne**.



A 4-year-old tree of **O'Rourke**



A 3-year old tree of **Tiger**



A 4-year old tree of **Champagne**

Figure 2. Comparison of leaf characteristics of three fig breeding selections.



Leaves of **O'Rourke**



Leaves of **Champagne**



Leaves of **Tiger**

Figure 3. Comparison of fruit characteristics of three fig breeding selections.



Fruit of **O'Rourke**



Fruit of **Tiger**



Fruit of **Champagne**

Cultivar Names:

L57-11-103 = 'ORourke'

L55-13-22 = 'Champagne'

L57-13-121 = 'Tiger'